TPDES Permit No. WQ0003197000
This Permit supersedes and replaces
Permit No. WQ0003197000
issued on June 27, 1997.
[*For TCEQ use only EPA ID No. TX0120197*]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P.O. Box 13087
Austin, Texas 78711-3087

TPDES PERMIT FOR CONCENTRATED ANIMAL FEEDING OPERATIONS
under provisions of
Section 402 of the Clean Water Act
Chapter 26 of the Texas Water Code and
Section 382.051 of the Texas Clean Air Act

I. Permittee:
   A. Owner — Hidden View Dairy, a Texas general partnership
   B. Owner Address — 1684 Private Road 1401
      Dublin, Texas 76446

II. Type of Permit: Major Amendment / Air & Water Quality

III. Nature of Business Producing Waste: CAFO; Dairy; SIC No. 02410

IV. General Description and Location of Waste Disposal System:

Maximum Capacity: 3,000 total head, of which 2,500 head are milking cows
Site Plan: See Attachment A.
Retention Control Structures (RCS) total required capacities without freeboard (acre-feet): Treatment Pond – 6.3, RCS #1&2 – 53.9, RCS #3 – 13.5, RCS #4 – 5.9; Treatment pond and RCS #1 and #2 act in-series.
Land Management Units (LMUs) (acres): LMU#1 - 26, LMU#2 - 64, LMU#3 - 54, LMU#3a – 15.2, LMU#4 - 40, LMU#4a – 21.1, LMU#5 – 23.4, LMU#6 – 18, LMU#7 – 49.5; for locations see Attachment B.
Location: The facility is located on the northwest side of County Road 522, approximately one-quarter mile northeast of the intersection of County Road 522 and State Highway 6 in Erath County, Texas. Latitude: 32° 05' 47"N Longitude: 98° 15' 06"W. See Attachment C.
Drainage Basin: The facility is located in the drainage area of the North Bosque River in Segment No. 1226 of the Brazos River Basin.

This Permit contained herein shall expire at midnight, five years after the date of Commission approval.

ISSUED DATE:

For the Commission

**V. Definitions.** All definitions in Chapter 26 of the Texas Water Code, 30 Texas Administrative Code (TAC) Chapters 305 and 321, Subchapter B shall apply to this permit and are incorporated by reference.

**VI. Permit Applicability and Coverage**

**A. Discharge Authorization.** No discharge is authorized by this permit except as allowed by the provisions in this permit and 40 Code of Federal Regulations Chapter 412, which is adopted by reference in 30 TAC Section (§) 305.541.

**B. Application Applicability.** The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

**C. Air Quality Authorization.** The permittee shall comply with the requirements listed in Section VII.D. of this permit and shall:

1. maintain a minimum treatment capacity of 3.5 acre-feet in the Treatment Pond; and
2. include a stage storage table for the treatment pond in the RCS Management Plan.

**VII. Pollution Prevention Plan (PPP) Requirements**

**A. Technical Requirements**

1. PPP General Requirements
   (a) The permittee shall update and implement a PPP for this facility upon issuance of this permit. The PPP shall:
      (1) be prepared in accordance with good engineering practices;
      (2) include measures necessary to limit the discharge of pollutants to surface water in the state;
      (3) describe and ensure the implementation of practices which are to be used to assure compliance with the limitations and conditions of this permit;
      (4) include all information listed in Section VII.A.;
      (5) identify specific individual(s) who is/are responsible for development, implementation, operation, maintenance, inspections, recordkeeping, and revision of the PPP. The activities and responsibilities of the pollution prevention personnel shall address all aspects of the facility's PPP;
      (6) be signed by the permittee or other signatory authority in accordance with 30 TAC § 305.44 (relating to Signatories to Applications); and
      (7) be retained on site.
   (b) The permittee shall amend the PPP:

(1) before any change in the number or configuration of LMUs;
(2) before any increase in the maximum number of animals and/or the maximum number of milking cows;
(3) before operation of any new control facilities;
(4) before any change that has a significant effect on the potential for the discharge of pollutants to water in the state;
(5) if the PPP is not effective in achieving the general objectives of controlling discharges of pollutants from the production area or LMUs; or
(6) within 90 days following written notification from the executive director that the plan does not meet one or more of the minimum requirements of this permit.

(c) Maps. The permittee shall maintain the following maps as part of the PPP.
(1) Site Map. The permittee shall update the site map as needed to reflect the layout of the facility. The map shall include, at a minimum, the following information: facility boundaries; pens; barns; berms; open lots; manure storage areas; areas used for composting; RCSs or other control facilities; LMUs, including off-site areas which are owned, operated, or under the control of the facility owner or operator which will be used for land application of manure, sludge or wastewater; water wells, abandoned and in use, which are on-site or within 500 feet of the facility boundary; all springs, lakes, or ponds located on-site or within one mile of the facility boundary; and dead animal burial sites.
(2) Land Application Map. Natural Resource Conservation Service (NRCS) soil survey maps of all LMUs shall depict:
(i) the boundary of each LMU and acreage;
(ii) all buffer zones required by this permit; and
(iii) the unit name and symbol of all soils in the LMU.

(d) Potential Pollutant Sources/Site Evaluation
(1) Potential Pollutant Sources. The PPP shall include a description of potential pollutant sources and indicate all measures that will be used to prevent contamination from the pollutant sources. Potential pollutant sources include any activity or material that may reasonably be expected to add pollutants to surface water in the state from the facility.
(2) Soil Erosion. The PPP shall identify areas that, due to topography, activities, or other factors, have a high potential for significant soil erosion. If these areas have the potential to contribute pollutants to surface water in the state, the PPP shall identify measures used to limit erosion and pollutant runoff.

(3) Control Facilities. The PPP shall include the location and a description of control facilities. The control facilities shall be appropriate for the identified sources of pollutants at the CAFO.

(4) Recharge Feature Certification. The recharge feature certification dated April 15, 2006 shall be implemented, updated by the permittee as often as necessary, and maintained in the PPP.

(5) 100-year Floodplain. All control facilities, including holding pens and RCSs, shall be located outside of the100-year floodplain or protected from inundation and damage that may occur during the flood.

(e) Spill Prevention and Recovery. The permittee shall take appropriate measures necessary to prevent spills and to clean up spills of any toxic pollutant. Where potential spills can occur, materials, handling procedures and storage shall be specified. The permittee shall identify the procedures for cleaning up spills and shall make available the necessary equipment to personnel to implement a clean up. The permittee shall store, use, and dispose of all herbicides and pesticides in accordance with label instructions. There shall be no disposal of herbicides, pesticides, solvents or heavy metals, or of spills or residues from storage or application equipment or containers, into RCSs. Incidental amounts of such substances entering a RCS as a result of stormwater transport of properly applied chemicals is not a violation of this permit.

2. Discharge Restrictions and Monitoring Requirements.

(a) Discharge Restrictions. Wastewater may be discharged to waters in the state from a properly designed, constructed, operated and maintained RCS whenever chronic or catastrophic rainfall events, or catastrophic conditions cause an overflow. There shall be no effluent limitations on discharges from RCSs which meet the above criteria.

(b) Monitoring Requirements. The permittee shall sample and analyze all discharges from RCSs for the following parameters:

| Parameter | Sample Type | Sample Frequency |
|---|---|---|
| $BOD_5$ | Grab | 1/day [1] |
| Total Coliform | Grab | 1/day [1] |
| Fecal Coliform | Grab | 1/day [1] |
| Total Dissolved Solids (TDS) | Grab | 1/day [1] |
| Total Suspended Solids (TSS) | Grab | 1/day [1] |
| Nitrate (N) | Grab | 1/day [1] |
| Total Phosphorus | Grab | 1/day [1] |
| Ammonia Nitrogen | Grab | 1/day [1] |
| Pesticides [2] | Grab | 1/day [1] |

[1] Sample shall be taken within the first 30 minutes following the initial discharge and then once per day while discharging.
[2] Any pesticide which the permittee has reason to believe could be present in the wastewater.

(c) If the permittee is unable to collect samples due to climatic conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.), the permittee shall document why discharge samples could not be collected. Once dangerous conditions have passed, the permittee shall conduct the required sampling.

3. RCS Design and Construction

(a) RCS Certifications

(1) The permittee shall ensure that the design and completed construction of modified RCSs (See Section X.A.1) is certified by a licensed Texas Professional Engineer prior to use. The certification shall be signed and sealed in accordance with Texas State Board of Professional Engineers requirements.

(2) Documentation of liner and capacity certifications must be completed for each RCS prior to use and kept on-site in the PPP. Once construction and modification is complete, new capacity certifications will be provided. The table below shows the liner and current capacity certifications that have been provided.

| | Liner Certification | Current Capacity Certification | |
|---|---|---|---|
| RCS | Date | Date | Volume (acre-feet) |
| Treatment Pond | August 2002 | April 1997 | 13.95 |
| RCS #1 | February 1995 | April 1997 | 78.98 |
| RCS #2 | February 1995 | April 1997 | 4.46 |
| RCS #3 | February 2003 | April 1997 | 5.59 |
| RCS #4 | August 2002 | April 1997 | 11.41 |
| Settling Basin (solids separator adjacent to RCS #2) | November 2005 | Not Required | |
| Settling Basin #2 (solids separator) | August 2005 | | |
| Settling Basin #3 (solids separator) | August 2005 | | |
| Upper Slurry Basin #1 | December 2005 | | |
| Slurry Basin | April 2002 | | |

(b) Design and Construction Standards. The permittee shall ensure that each RCS is designed and constructed or modified in accordance with the technical standards developed by the NRCS, American Society of Agricultural Engineers, American Society of Civil Engineers, or American Society of Testing Materials that are in effect at the time of construction. Where site-specific variations are warranted, a licensed Texas Professional Engineer must document these variations and their appropriateness to the design.

(c) RCS Drainage Area

(1) The permittee shall describe in the PPP and implement measures that will be used to minimize entry of uncontaminated runoff into RCSs.

(2) The permittee shall maintain the drainage area to minimize ponding or puddling of water outside the RCS.

(d) RCS Sizing.

(1) The design plan must include documentation describing the sources of information, assumptions and calculations used in determining the appropriate volume capacity and structural features of each RCS, including embankment and liners.

(2) Design Rainfall Event. Any RCS system authorized under this individual permit shall be designed and constructed or modified to meet or exceed the margin of safety, equivalent to the volume of runoff and direct precipitation from the 25 year/10 day rainfall event. The design rainfall event for this CAFO is 12 inches.

(3) Any RCS capacity that is greater than the minimum capacity required by this permit may be allocated to additional sludge storage volume, which will increase the design sludge cleanout interval for the RCS. The new sludge cleanout interval will be identified in the RCS management plan maintained in the PPP, the stage storage tables will accurately reflect the new volumes, and the pond markers will visually identify the new volume levels. Beginning in year 3 and annually thereafter, the sludge accumulation volume will be measured and recorded in the PPP.

(e) Irrigation Equipment Design. The permittee shall ensure that the irrigation system design is capable of removing wastewater from the RCSs on a regular schedule. Equipment capable of dewatering the RCSs shall be available and operational whenever needed to restore the operating capacity required by the RCS management plan.

(f) Embankment Design and Construction. The RCSs on this CAFO have a depth of water impounded against the embankment at the spillway elevation of three feet or more, therefore the RCSs are considered to be designed with an embankment. The PPP shall include a description of the design specifications for the RCS embankments. The following design specifications are required for any structural modification of a RCS.

(1) Soil Requirements. Soils used in the embankment shall be free of foreign material such as trash, brush, and fallen trees.

(2) Embankment Lifts. The embankment shall be constructed in lifts or layers no more than eight inches compressed to six inches thick at a minimum compaction effort of 95 percent Standard Proctor Density (ASTM D698) at -1% to +3% of optimum moisture content.

(3) Stabilize Embankment Walls. All embankment walls shall be stabilized to prevent erosion or deterioration.

(4) Compaction Testing. Embankment construction must be accompanied by laboratory certified compaction tests in accordance with the American Society of Testing Materials (ASTM D698) or equivalent testing standards. Compaction tests will provide support for the liner certification performed by a licensed Texas professional engineer or a licensed Texas professional geoscientist as meeting a permeability equal to, or less than, $1 \times 10^{-7}$ cm/sec over a thickness of 18 inches or its equivalency in other materials.

(5) Spillway or Equivalent Protection. The modification of these RCSs with embankments shall be constructed with a spillway or other outflow device properly sized according to NRCS design and specifications to protect from overtopping and to protect the integrity of the embankment during chronic or catastrophic rainfall that is greater than the design rainfall event.

(6) Embankment Protection. For all structural modifications of existing

RCSs, each RCS must have a minimum of 2 vertical feet of materials equivalent to those used at the time of design and construction between the top of the embankment and the structure's spillway. All RCSs on this CAFO will have spillways.

(g) RCS Hydrologic Connection. The permittee shall ensure site-specific documentation is prepared and certified by a licensed Texas professional engineer or licensed Texas professional geoscientist that shows that no significant hydrologic connection exists between the contained wastewater and water in the state. Where the permittee cannot document that no significant hydrologic connection exists, RCSs must have a liner consistent with the requirements of this subsection.

(1) Documentation must show that there will be no significant leakage from the RCS; or that any leakage from the RCS will not migrate to water in the state.

(2) If it is claimed that no significant leakage would result from the use of in-situ materials, documentation must be provided by an NRCS engineer, or a licensed Texas professional engineer or a licensed Texas professional geoscientist that a liner is not needed to prevent a significant hydrologic connection between the contained wastewater and waters in the state. This information will be considered documentation that no significant hydrologic connection exists.

(3) Site-specific conditions may be considered in the design and construction of liners. Where no site-specific assessment has been performed demonstrating that there will be no significant leakage from the RCS or that any leakage from the RCS will not migrate to water in the state, a liner must be designed by a licensed Texas professional engineer and documented to have hydraulic conductivities no greater than $1 \times 10^{-7}$ centimeters per second (cm/sec), with a thickness of 1.5 feet or greater or its equivalency in other materials. The liner must be constructed in accordance with the design and certified as such by a licensed Texas professional engineer. The permittee shall maintain the liner to minimize the percolation of wastewater through the liner.

(4) Liner Sampling. The licensed Texas professional engineer or licensed Texas professional geoscientist shall use best professional practices to ensure that core samples or other liner samples will be appropriately plugged with material that also meet liner thickness or saturated hydraulic conductivity tested at optimal moisture content standards.

(5) Leak Detection System. If notified by the executive director that significant potential exists for the adverse impact of water in the state or drinking water from leakage of the RCS, the permittee shall install a leak detection system or monitoring well(s) in accordance with that

notice. Documentation of compliance with the notification must be kept with the PPP, as well as copies of all sampling data.

4. Special Considerations for Existing RCSs. An existing RCS that has been properly maintained without any modifications and has no apparent structural problems or leakage is considered to be properly designed with respect to the embankment design and construction and hydrologic connection requirements of this permit, provided that any required documentation was completed in accordance with the requirements at the time of construction. If no documentation exists, the RCS must be certified by a licensed professional Texas engineer as providing protection equivalent to the requirements of this permit.

5. Operation and Maintenance of RCS

(a) RCS Operation and Maintenance

(1) The permittee must operate and maintain a margin of safety in the RCS to contain the volume of runoff and direct precipitation from the 25 year/10 day rainfall event.

(2) The permittee shall implement an RCS management plan incorporating the margin of safety developed by a licensed Texas professional engineer (See Section X.A). The management plan shall become a component of the PPP, shall be developed for the RCS system, and must describe or include:

(i) RCS management controls appropriate for the CAFO and the methods and procedures for implementing such controls;

(ii) the methods and procedures for proper operation and maintenance of each RCS consistent with the system design;

(iii) the appropriateness and priorities of any controls reflecting the identified sources of pollutants at the facility;

(iv) a stage/storage table for each RCS with minimum depth increments of one-foot, including the storage volume provided at each depth;

(v) a second table or sketch that includes increments of water level ranges for volumes of total design storage, including the storage volume provided at each specified depth (or water level) and the type of storage designated by that depth; and

(vi) the planned end of month storage volume anticipated for each RCS for each month of the year and the corresponding operating depth expected at the end of each month of the year, based on the design assumptions.

(3) The wastewater level in each RCS shall be maintained at or below the maximum operating level expected during that month, according to the design of each RCS. When rainfall volumes exceed average rainfall data used in design calculations, stored volumes may encroach into the design storm event storage provided that documentation is available to support the occurrence and demonstrate

that the RCS is otherwise being managed according to the RCS Management Plan criteria. In circumstances where an RCS has a water level exceeding the expected end of the month depth, the permittee shall document in the PPP why the level of water in the structure is not at or below the expected depth. Also, if the water level in an RCS encroaches into the storage volume reserved for the design rainfall event, the permittee must document, in the PPP, the conditions that resulted in this occurrence. As soon as irrigation is feasible and not prohibited by Section VII.A.8.f. and g., the permittee shall irrigate until the RCS water level is at or below the maximum operating level expected during that month.

(4) Imminent Overflow. If a RCS is in danger of imminent overflow from chronic or catastrophic rainfall or catastrophic conditions, the permittee shall take reasonable steps to irrigate wastewaters to LMUs only to the extent necessary to prevent overflow from the RCS. If irrigation results in a discharge from the LMU, the permittee shall collect samples from the drainage pathway at the point of the discharge from the edge of the LMU where the discharge occurs, analyze the samples for the parameters listed in Section VII. A.2.(b), and provide the appropriate notifications as required by Section VIII.B of this permit and 30 TAC §321.44.

(5) Permanent Pond Marker. The permittee shall install and maintain a permanent pond marker (measuring device) in the Treatment Pond and RCS Numbers 1-4, visible from the top of the levee to show the following:

(i) the volume level for the design rainfall event; and

(ii) one-foot increments beginning from the bottom of the RCS to the top of the embankment or spillway, and

(iii) design volume levels for maximum sludge accumulation(except for the Treatment Pond); treatment (if any); and operating volume (calculated process water plus rainfall runoff minus evaporation) must be identifiable on the marker.

(6) Rain Gauge. A rain gauge capable of measuring the design rainfall event shall be kept on site and properly maintained.

(7) Sludge Removal. The permittee shall monitor sludge accumulation and depth in a RCS, as necessary, but not less than annually beginning in year three (3) from the date of this permit, based upon the design sludge storage volume in the RCS. Sludge shall be removed from RCSs in accordance with the design schedule for cleanout in the RCS Management Plan to prevent the accumulation of sludge from exceeding the designed sludge volume of the structure. Removal of sludge shall be conducted during favorable wind

conditions that carry odors away from nearby receptors. Sludge may only be beneficially utilized by land application to a Third Party Field if in accordance with Section VII.A.8(e)(6). Alternatively, sludge may be disposed by any of the following method(s):

i. delivery to a composting facility authorized by the executive director;
ii. delivery to a permitted landfill located outside of the major sole source impairment zone, subject to the requirements of commission rules relating to industrial solid waste;
iii. beneficial use outside of the major sole source impairment zone; or
iv. put to another beneficial use approved by the executive director.

(8) Liner Protection and Maintenance. The permittee shall maintain liners to inhibit infiltration of wastewater. Liners must be protected from animals by fences or other protective devices. No tree shall be allowed to grow such that the root zone would intrude or compromise the structure of the liner or embankment. Any mechanical or structural damage to the liner shall be evaluated by a licensed Texas professional engineer within 30 days of the damage.

(9) Closure Requirements. A closure plan must be developed when an RCS will no longer be used or when the CAFO ceases or plans to cease operation. The closure plan shall be submitted to the appropriate regional office and the Land Application Team of the Water Quality Division in Austin (MC-148) within ninety (90) days of when operation of the CAFO or an individual RCS terminates. The closure plan for the RCS must, at a minimum, be developed using standards contained in the NRCS Practice Standard Code 360 (Closures of Waste Impoundments), as amended, and using the guidelines contained in the Texas Cooperative Extension/ NRCS publication #B-6122 (Closure of Lagoons and Earthen Manure Storage Structures), as amended. The permittee shall maintain or renew its existing authorization and maintain compliance with the requirements of this permit until the facility has been closed.

6. General Operating Requirements

(a) Flush/Scrape Systems. Flush/Scrape systems shall be operated in accordance with design criteria. This provision applies to vacuum tanks used to scrape manure or sludge in freestall barns and to dry manure handling systems.

(b) Pen Maintenance. The permittee shall maintain earthen pens to ensure good drainage, minimize ponding, and minimize the entrance of uncontaminated storm water to each RCS.

(c) Carcass Disposal. Carcasses shall be collected within 24 hours of death and properly disposed of within three days of death in accordance with Texas Water Code, Chapter 26; Texas Health and Safety Code, Chapter 361; and 30

TAC Chapter 335 (relating to Industrial Solid Waste and Municipal Hazardous Waste) unless otherwise provided for by the commission. Animals must not be disposed of in any liquid manure or process wastewater system. Disposal of diseased animals shall also be conducted in a manner that prevents a public health hazard in accordance with Texas Agriculture Code, §161.004, and 4 TAC §§ 31.3 and 58.31(b). The collection area for carcasses shall be addressed in the potential pollutant sources section of the PPP with management practices to prevent contamination of surface or groundwater; control access; and minimize odor.

(d) Manure and Sludge Storage

(1) Manure and sludge storage capacity requirements shall be based on manure and sludge production, land availability, and the NRCS Field Office Technical Guide (Part 651, Chapter 10) or equivalent standards. [See Special Provision G for the storage requirements applicable to slurry collected from freestall barns.]

(2) When manure is stockpiled, it shall be stored in a well-drained area, and the top and sides of stockpiles shall be adequately sloped to ensure proper drainage and prevent ponding of water. Runoff from manure or sludge storage piles must be retained on site. If the manure or sludge areas are not roofed or covered with impermeable material, protected from external rainfall, or bermed to protect from runoff during the design rainfall event, the manure or sludge areas must be located within the drainage area of the RCS and accounted for in the design calculations of the RCS.

(3) Manure or sludge stored for more than 30 days must be stored within the drainage area of a RCS or stored in a manner (i.e. storage shed, bermed area, tarp covered area, etc.) that otherwise prevents contaminated storm water runoff from leaving the storage area. All storage sites and structures located outside the drainage area of the RCS shall be designated on the site map.

(4) Temporary storage of manure or sludge shall not exceed 30 days and is allowed only in a RCS drainage area. Temporary storage of manure or sludge in the 100-year flood plain, near water courses or near recharge features is prohibited unless protected by berms or other structures to prevent inundation or discharges that may occur.

7. Well Protection Requirements.

(a) The permittee shall not locate or operate a new RCS, holding pen, or LMU within the following buffer zones:

(1) public water supply wells - 500 feet;

(2) wells used exclusively for private water supply - 150 feet; or

(3) wells used exclusively for agriculture irrigation - 100 feet.

(b) Irrigation of wastewater directly over a well head will require a structure protective of the wellhead that will prevent contact from irrigated wastewater.

| Well ID Number | Well Type | Producing or Non-Producing | Open, Cased, or Capped | Protective Measure |
|---|---|---|---|---|
| 1 | Domestic | Producing | Cased | Well head enclosed in building; sealed surface slab |
| 2 | Facility | Producing | Cased | Located outside pen area; steel sleeve inside surface slab |
| 3 | Facility | Producing | Cased | Upgradient from pen area; sealed surface slab |
| 4 | Facility | Producing | Cased | Located outside pen area; steel sleeve and surface slab |
| 5 | Facility | Producing | Cased | Maintain 150 ft. buffer |
| 6 | Domestic | Producing | Cased | Maintain 150 ft. buffer |
| OS1* | Unknown | Unknown | Unknown | Located >150 ft. from LMU |
| OS2* | Unknown | Unknown | Unknown | Located >150 ft. from LMU |

*Off-site wells located within 500 ft. of property boundary were not inspected. A 500 ft. buffer is not required based on the well not serving as a public water supply.

(c) Construction of any new water wells must be done by a licensed water well driller.

(d) All abandoned and unusable wells shall be plugged according to 16 TAC § 76.702.

(e) The permittee may continue the operation and use of any existing holding pens and RCSs located within the required well buffer zones provided they are in accordance with the facility's approved recharge feature evaluation and certification. Buffer zone variance documentation must be kept on-site and made available to TCEQ personnel upon request.

8. Land Application

(a) Nutrient Management Plan (NMP) Required. The certified NMP dated August 28, 2006 shall be implemented upon issuance of this permit. The plan shall be updated as appropriate or at a minimum of annually according to NRCS guidance for Practice Standard 590. The operator shall make available to the executive director, upon request, a copy of the site-specific NMP and documentation of the implementation.

(b) Comprehensive Nutrient Management Plan (CNMP) required. The permittee must develop and operate under a CNMP certified by the Texas State Soil and Water Conservation Board. The CNMP must be implemented by December 31, 2006.

(c) Critical Phosphorus Level.

(1) When results of the annual soil analysis show a phosphorus level in the soil of more than 200 ppm but not more than 500 ppm in Zone 1 (0-6 inch incorporated; 0-2 or 2-6 inch not incorporated) depth for a particular LMU or if ordered by the commission to do so in order to protect the quality of waters in the state, then the permittee shall:

(i) file with the executive director a new or amended nutrient utilization plan (NUP) with a phosphorus reduction component based on crop removal that is certified as acceptable by a person described in (3) below; or

(ii) show that the level is supported by a NUP that is certified as acceptable by a person described in (3) below.

(2) The permittee shall cease land application of manure, sludge or wastewater to the affected area until the NUP has been approved by the TCEQ. After a NUP is approved, the permittee shall land apply in accordance with the NUP until soil phosphorus is reduced below the critical phosphorus level of 200 ppm extractable phosphorus. Thereafter, the permittee shall implement the requirements of the nutrient management plan or may elect to continue operating under the approved NUP for an additional period of time.

(3) NUP. A NUP is a NMP, based on NRCS Practice Standard Code 590, which utilizes a crop removal application rate. The NUP, based on crop removal, must be developed and certified by one of the following individuals or entities:

(i) an employee of the NRCS;

(ii) a nutrient management specialist certified by the NRCS;

(iii) the Texas State Soil and Water Conservation Board;

(iv) the Texas Cooperative Extension;

(v) an agronomist or soil scientist on full-time staff at an accredited university located in the State of Texas; or

(vi) a Certified Professional Agronomist certified by the American Society of Agronomy, a Certified Professional Soil Scientist certified by the Soil Science Society of America, or a licensed Texas professional geoscientist-soil scientist after approval by the executive director based on a determination by the executive director that another person or entity identified in this paragraph cannot develop the plan in a timely manner.

(4) When results of the annual soil analysis for extractable phosphorus indicate a level greater than 500 ppm in Zone 1 (0-6 inch incorporated; 0-2 or 2-6 inch not incorporated) depth, the permittee shall file with the executive director a new or amended NUP with a phosphorus reduction component, based on crop removal, that is certified as acceptable by a person described in (3) above. After the

new or amended NUP is approved, the permittee shall land apply in accordance with the NUP until soil phosphorus is reduced below 500 ppm extractable phosphorus.

(5) If the permittee is required to have a NUP with a phosphorus reduction component based on crop removal, and if the results of tests performed on composite soil samples collected 12 months or more after the plan is filed do not show a reduction in phosphorus concentration in Zone 1 (0-6 inch incorporated; 0-2 or 2-6 inch not incorporated) depth, then the permittee is subject to enforcement action at the discretion of the executive director.

(d) Buffer Requirements. The permittee shall meet the following buffer requirements for each LMU:

(1) Water in the state. Vegetative buffers shall be maintained in accordance with NRCS Field Office Technical Guidance. The permittee shall not apply manure, sludge or wastewater closer than 100 feet to any water in the state. Additionally, the permittee shall install and maintain a filter strip (according to NRCS Code 393) or vegetative barrier (according to NRCS Code 601), between the vegetative buffer and the land application area; and if the land application area is cropland the permittee shall install and maintain contour buffer strips (according to NRCS Code 332) within the land application area in addition to the filter strip or vegetative barrier. See Attachment B for the LMU map. See Special Provision X.E. for specific buffers on each LMU.

(2) Water wells. The permittee shall comply with the well protection requirements listed in Section VII.A.7.

(e) Exported Manure, Sludge or Wastewater: Manure, sludge or wastewater removed from the operation shall be disposed of by:

(1) delivery to a composting facility authorized by the executive director;

(2) delivery to a permitted landfill located outside of the major sole source impairment zone, subject to the requirements of commission rules relating to industrial solid waste;

(3) beneficial use outside of the major sole source impairment zone;

(4) put to another beneficial use approved by the executive director; or

(5) providing manure, sludge or wastewater to operators of third-party fields, i.e. areas of land in the major sole source impairment zone not owned, operated, controlled, rented, or leased by the CAFO owner or operator, that have been identified in the PPP.

(i) There must be a written contract between the permittee and the recipient that includes, but is not limited to, the following provisions:

(A) All transferred manure, sludge or wastewater shall be beneficially applied to third-party fields identified in

the PPP in accordance with the applicable requirements in 30 TAC §§ 321.36 and 321.40 at an agronomic rate based on soil test phosphorus. The requirements for development or implementation of a nutrient management plan or nutrient utilization plan, under 30 TAC § 321.40, do not apply to third-party fields.

(B) Manure and sludge must be incorporated on cultivated fields within 48 hours after land application.

(C) Land application rates shall not exceed the nitrogen application rate when soil phosphorus concentration in Zone 1 (0-6 inch incorporated; 0-2 or 2-6 inch not incorporated) depth is less than or equal to 50 ppm phosphorus.

(D) Land application rates shall not exceed two times the Phosphorus crop removal rate when soil phosphorus concentration in Zone 1 (0-6 inch incorporated; 0-2 or 2-6 inch not incorporated) depth is is greater than 50 ppm phosphorus and less than or equal to 150 ppm phosphorus.

(E) Land application rates shall not exceed one times the Phosphorus crop removal rate when soil phosphorus concentration in Zone 1 (0-6 inch incorporated; 0-2 or 2-6 inch not incorporated) depth is greater than150 ppm phosphorus and less than or equal to 200 ppm phosphorus.

(F) Third-party fields which have had manure, sludge or wastewater applied during the preceding year must be sampled within 12 months of any previous application to that field by a certified nutrient management specialist (CNMS) and the samples analyzed in accordance with 30 TAC § 321.36.

(G) A copy of the annual soil analyses shall be provided to the permittee within 60 days of the date the samples were taken.

(H) Temporary storage of manure or sludge is prohibited on third-party fields.

(ii) The permittee is prohibited from delivering manure, sludge or wastewater to an operator of a third-party field once the soil test phosphorus analysis shows a level equal to or greater than 200 ppm or after becoming aware that the third-party operator is not following appropriate provisions of 30 TAC §§ 321.36, 321.40 and/or the contract.

(iii) The permittee will be subject to enforcement action for violations of the land application requirements on any third-party field under contract.

(iv) The permittee shall submit records to the appropriate regional office quarterly that contain the name, locations, and amounts of manure, sludge or wastewater transferred to operators of third-party fields.

(f) Irrigation Operating Requirements

(1) Minimize Ponding. Irrigation practices shall be managed so as to minimize ponding or puddling of wastewater on the site, prevent tailwater discharges to waters in the state, and prevent the occurrence of nuisance conditions.

(2) Discharge Prohibited.

(i) The drainage of manure, sludge or irrigated wastewater is prohibited from a LMU, unless authorized under Section VII.A.5.(a)(4).

(ii) Where manure, sludge or wastewater is applied in accordance with the nutrient management plan and/or NUP, precipitation-related runoff from LMUs under the control of the permittee is authorized.

(iii) If a discharge from the irrigation system is documented as a violation, the permittee may be required by the executive director to install an automatic emergency shut-down or alarm system to notify the permittee of system problems.

(3) Backflow Prevention. If the permittee introduces wastewater or chemicals to water well heads for the purpose of irrigation, then backflow prevention devices shall be installed according to 16 TAC Chapter 76 (related to Water Well Drillers and Water Well Pump Installers).

(g) Nighttime Application. (LMU or Third Party Field)

(1) Land application at night shall only be allowed if there is no occupied residence(s) within 0.25 mile from the outer boundary of the actual area receiving manure, sludge or wastewater application. In areas with an occupied residence within 0.25 mile from the outer boundary of the actual area receiving manure, sludge or wastewater application, application shall only be allowed from one hour after sunrise until one hour before sunset, unless the current occupant of such residences have, in writing, agreed to specified nighttime applications.

(2) Land application of manure, sludge or wastewater is prohibited between 12a.m. and 4a.m.

9. Sampling and Testing.

(a) Manure and Wastewater. The permittee shall collect and analyze at least one representative sample of wastewater and one representative sample of each

category of manure (solids, settling basin solids, slurry, compost and others as appropriate) each year for total nitrogen, total phosphorus, and total potassium. The results of these analyses shall be used in determining application rates.

(b) Soils.

(1) Initial Sampling. Before commencing manure, sludge or wastewater application on any new LMUs, the permittee shall have at least one representative soil sample from each of the LMUs collected and analyzed according to the following procedures.

(2) Annual Sampling. The permittee shall have soil samples collected annually for each LMU where manure, sludge or wastewater was applied during the preceding year. The permittee is not required to collect soil samples on LMUs where manure, sludge or wastewater has not been applied during the preceding year. The permittee must comply with the initial sampling requirement before resuming land application to such LMUs.

(3) Sampling Procedures. Sampling procedures shall employ accepted techniques of soil science for obtaining representative samples and analytical results, and be consistent with approved methods described in the executive director's guidance entitled "Soil Sampling for Nutrient Utilization Plans (RG-408)."

(i) Soil samples must be collected by one of the following persons:

(A) the NRCS;

(B) a certified nutrient management specialist;

(C) the Texas State Soil and Water Conservation Board;

(D) the Texas Cooperative Extension; or

(E) an agronomist or soil scientist on full-time staff at an accredited university located in the State of Texas.

(ii) Samples shall be collected and analyzed within the same 45-day time frame each year, except when crop rotations or inclement weather require a change in the sampling time. The reason for a change in sampling timeframes shall be documented in the PPP.

(iii) Obtain one composite sample for each soil depth zone per uniform soil type (soils with the same characteristics and texture) within each LMU.

(iv) Composite samples shall be comprised of 10 - 15 randomly sampled cores obtained from each of the following soil depth zones:

(A) Zone 1: zero to six inches (for an LMU where the manure and sludge is physically incorporated or injected directly into the soil) or zero to two inches (for an LMU where the manure and sludge is not

incorporated into the soil). Wastewater that is less than two percent (2%) solids is considered to be incorporated when land applied but slurry vacuumed from freestall barns is not considered incorporated unless physically incorporated or injected into the field where applied. If a zero to two inch sample is required, then an additional sample from the two to six inch soil depth zone shall be obtained in accordance with the provisions of this section; and

(B) Zone 2: six to 24 inches.

(4) Laboratory Analysis. Samples shall be analyzed by a soil testing laboratory. Physical and chemical parameters and analytical procedures for laboratory analysis of soil samples from LMUs shall include the following:

(i) nitrate reported as nitrogen in ppm;
(ii) phosphorus (extractable, ppm) using Mehlich III with Inductively Coupled Plasma (ICP);
(iii) potassium (extractable, ppm);
(iv) sodium (extractable, ppm);
(v) magnesium (extractable, ppm);
(vi) calcium (extractable, ppm);
(vii) soluble salts (ppm) or electrical conductivity (dS/m) - determined from extract of 2:1 (v/v) water/soil mixture; and
(viii) soil pH (soil:water, 1:2 ratio).

10. Preventative Maintenance Program.

(a) Facility Inspections

(1) General Requirements

(i) Inspections shall include visual inspections and equipment testing to determine conditions that could cause breakdowns or failures resulting in discharge of pollutants to water in the state or the creation of a nuisance condition.

(ii) The permittee shall draft a report, to be maintained in the PPP, to document the date of inspections, observations and actions taken in response to deficiencies identified during the inspection. The permittee shall correct all the deficiencies within 30 days or shall document the factors preventing immediate correction.

(2) Daily Inspections. The permittee shall conduct daily inspections on all water lines, including drinking water and cooling water lines, which are located within the drainage area of a RCS.

(3) Weekly Inspections.. The permittee shall conduct weekly inspections on:

(i) all control facilities, including all RCSs, storm water

diversion devices, runoff diversion structures, control devices for management of potential pollutant sources, and devices channeling contaminated storm water to each RCS; and

(ii) equipment used for land application of manure, sludge or wastewater.

(4) Monthly Inspections. The permittee shall conduct monthly inspections on:

(i) mortality management systems, including collection areas; and

(ii) disposal and storage of toxic pollutants, including pesticide containers.

(5) Annual Site Inspection.

(i) The permittee shall annually conduct a complete site inspection of the production area and LMUs and shall document the findings, including any significant observations requiring further action in the PPP.

(ii) The inspection shall verify that:

(A) the description of potential pollutant sources is accurate;

(B) the site plan/map has been updated or otherwise modified to reflect current conditions;

(C) the controls outlined in the PPP to reduce pollutants and avoid nuisance conditions are being implemented and are adequate; and

(D) records documenting significant observations made during the site inspection.

(b) Five Year Evaluation. Once every five years the permittee shall have a licensed Texas professional engineer review the existing engineering documentation, complete a site evaluation of the structural controls, review existing liner and RCS capacity documentation, and complete and certify a report of their findings. The report must be kept in the PPP.

11. Management Documentation. The permittee shall maintain the following records in the PPP:

(a) a copy of the administratively complete and technically complete individual water quality permit application and the written authorization issued by the commission or executive director;

(b) a copy of the approved recharge feature certification plus appropriate updates;

(c) a copy of the comprehensive nutrient management plan, nutrient management plan and nutrient utilization plan plus appropriate updates to these plans, if required;

(d) the RCS liner certifications;

(e) any written agreement with a landowner which documents the allowance of nighttime application of manure, sludge or wastewater;

(f) documentation of employee and operator training, including verification of the date, time of attendance, and completion of training;
(g) the RCS management plan;
(h) any measurements of sludge accumulation in the RCSs
(i) the capacity of each RCS, as certified by a licensed Texas professional engineer; and
(j) a copy of all third-party field contracts.

**B. General Requirements**

1. The permittee shall not construct any component of the production area in any stream, river, lake, wetland, or playa (except as defined by and in accordance with the Texas Water Code § 26.048).
2. Animals confined on the CAFO shall be restricted from coming into direct contact with surface water in the state through the use of fences or other controls.
3. The permittee shall prevent the discharge of pesticide and herbicide contaminated waters into surface water in the state. All wastes from dipping vats, pest and parasite control units, and other facilities used for the application of potentially hazardous or toxic chemicals shall be handled and disposed of in a manner that prevents any significant pollutants from entering water in the state or creating a nuisance condition.
4. The permittee shall operate the CAFO in such a manner as to prevent nuisance conditions of air pollution as mandated by Texas Health and Safety Code, Chapters 341 and 382.
5. The permittee shall take reasonable steps necessary to prevent adverse effects to human health or safety, or to the environment.
6. The permittee shall maintain control of the RCSs, required LMUs, and control facilities identified on the site map submitted in the application. In the event the permittee loses control of any of these areas, the permittee shall notify the executive director within 5 working days.
7. If animals are maintained in pastures, the permittee shall maintain crops, vegetation, forage growth, or postharvest residues in those pastures during the normal growing season, excluding the feed and/or water trough areas and open lots designated on the site map.

**C. Training**

1. Employee Training
   (a) CAFO employees who are responsible for work activities relating to compliance with provisions of this permit must be regularly trained or informed of any information pertinent to the proper operation and maintenance of the facility and land application of manure, sludge or wastewater.
   (b) Employee training shall address all levels of responsibility of the general components and goals of the PPP. Training shall include appropriate topics,

such as land application of manure, sludge or wastewater, proper operation and maintenance of the facility, good housekeeping, material management practices, recordkeeping requirements, and spill response and clean up.

(c) The permittee is responsible for determining the appropriate training frequency for different levels of personnel. The PPP shall identify periodic dates for such training.

2. Operator Training. The operator shall attend and complete at least 8 hours of continuing education in animal waste management or its equivalent, developed by the executive director and the Texas Cooperative Extension, for each two year period.

3. Verification of the date and time(s) of attendance and completion of required training shall be documented in the PPP.

**D. Air Standard Permit Requirements**

1. Air emission limitations.

(a) Facilities shall be operated in such a manner as to prevent the creation of a nuisance as defined by Texas Health and Safety Code, 30 TAC §§ 341.011 and 321.32(32), and as prohibited by 30 TAC § 101.4. Facilities shall be operated in such a manner as to prevent a condition of air pollution as defined by Texas Health and Safety Code, 30 TAC § 382.003(3).

(b) The permittee shall take necessary action to identify any nuisance condition that occurs. The permittee shall take action to abate any nuisance condition as soon as practicable or as specified by the executive director.

2. Wastewater treatment. The permittee shall design and operate RCSs to minimize odors in accordance with accepted engineering practices. Each system shall be operated in accordance with the design and a RCS management plan that minimizes odors.

(a) Accepted engineering practices to minimize odors include anaerobic treatment lagoons, aerobic treatment lagoons, or other equivalent technology.

(b) Accepted design standards and requirements for this method of treatment are: an anaerobic treatment lagoon shall be designed in accordance with American National Standards Institute/American Society of Agricultural Engineers EP403.3 July 1999 (or subsequent updates); NRCS Field Office Technical Guidance, Practice Standard 359, Waste Treatment Lagoon, or the equivalent for the control of odors. The primary lagoon in a multi-stage lagoon system shall be designed with a minimum treatment volume so that the lagoon maintains a constant level at all times unless prohibited by climatic conditions. A multi-stage lagoon system shall be designed to minimize the amount of contaminated storm water runoff entering the primary lagoon by routing the contaminated storm water runoff into a secondary RCS.

(c) This CAFO uses a single anaerobic treatment lagoon with a minimum treatment volume of 3.5 acre-feet and a maximum sludge accumulation of 2.8 acre-feet.

3. Dust control. To minimize dust emissions, the CAFO shall be operated and

maintained as follows.

(a) Fugitive emissions from all grain receiving pits, where a pit is used, shall be minimized through the use of choke feeding or through an equivalent method of control. If choke feeding is used, operation of conveyors associated with receiving shall not commence until the receiving pits are full.

(b) As necessary, emissions from all on-site roads, truck loading and unloading areas, parking areas, and other traffic areas shall be controlled with one or more of the following methods to minimize nuisance conditions and maintain compliance with all applicable commission requirements:

(1) sprinkled with water;

(2) treated with effective dust suppressant(s); or

(3) paved with a cohesive hard surface and cleaned.

(c) Any on-site feed milling operations on this CAFO shall be reflected in the PPP and operated in compliance with applicable TCEQ air quality control regulations.

(d) If the executive director determines that the implementation and employment of these practices is not effective in controlling dust, the permittee shall implement any necessary additional abatement measures to control and minimize this contaminant within the time period specified by the executive director.

4. Maintenance and housekeeping. The permittee shall comply with the following to help prevent nuisance conditions.

(a) The premises shall be maintained to prevent the occurrence of nuisance conditions from odors and dust. Spillage of any raw products or waste products causing a nuisance condition shall be picked up and properly disposed of daily.

(b) Proper pen drainage shall be maintained at all times. Earthen pen areas shall be maintained by scraping uncompacted manure and shaping pen surfaces as necessary to minimize odors and ponding.

## VIII. Recordkeeping, Reporting, and Notification Requirements

**A. Recordkeeping**. The permittee shall keep records on site for a minimum of five years from the date the record was created and shall submit them within five days of a written request by the executive director.

1. The permittee shall update records daily to include:

(a) all measurable rainfall events; and

(b) the wastewater levels in each RCS, as shown on the depth marker. In circumstances where an RCS has a water level exceeding the expected end of the month depth, the permittee shall document in the PPP why the level of water in the structure is not at or below the expected depth.

2. The permittee shall update records weekly to include:

(a) records of all manure, sludge or wastewater removed from the CAFO that shows the dates, amount, and recipient. The permittee must make the most

recent nutrient analysis available to any hauler; and

(b) inspections of control facilities and land application equipment.

3. The permittee shall update records monthly to include:
   (a) records describing mortality management practices;
   (b) storage and disposal of chemicals, including pesticide containers; and
   (c) records of all manure, sludge or wastewater applied on LMUs. Such records must include the following information:
      (i) date of manure, sludge or wastewater application to each LMU;
      (ii) location of the specific LMU and the volume applied for each individual crop during each application event;
      (iii) acreage on which manure, sludge or wastewater is applied for each individual crop;
      (iv) total amount of nitrogen and phosphorus applied per acre to each LMU on a dry basis, including sources of nutrients other than manure, sludge or wastewater; and the basis for such calculation; and
      (v) weather conditions, such as temperature, precipitation, and cloud cover, during the land application and 24 hours before and after the land application.
4. The permittee shall update records annually to include:
   (a) actual annual yield of each harvested crop for each LMU;
   (b) percent moisture content of the manure and wastewater;
   (c) annual nutrient analysis for at least one representative sample of irrigation wastewater and one representative sample of manure (solids and slurry) for total nitrogen, total phosphorus, and total potassium;
   (d) any initial and annual soil analysis reports;
   (e) the annual site inspection report; and
   (f) any measurements of sludge accumulation in all of the RCSs including but not limited to the requirements in VII.A.5(a)(7).
5. The Five Year Evaluation report must be updated every five years.
6. The permittee shall keep the following records on-site:
   (a) a list of any significant spills of potential pollutants at the CAFO that have a significant potential to reach water in the state;
   (b) documentation of liner maintenance by an NRCS engineer, a licensed Texas professional engineer or a licensed Texas professional geoscientist;
   (c) RCS design calculations and as-built capacity certifications;
   (d) embankment certifications;
   (e) liner certifications;
   (f) a copy of current and amended site plans; and
   (g) copies of all notifications to the executive director, including any made to a regional office.

**B. Reporting and Notifications**

1. The permittee shall provide written notice to the appropriate TCEQ regional office as

soon as an RCS cleaning is scheduled, but not less than ten days before cleaning. The permittee shall also provide written verification of completion to the same regional office within five days after the cleaning has been completed. This paragraph does not apply to the cleaning of solid separators or settling basins that are functioning as solid separators.

2. The permittee shall notify the appropriate TCEQ regional office in writing or by electronic mail with the date, time, and location at least ten working days before collecting soil samples from LMUs.

3. Discharge notification. If for any reason there is a discharge of manure, sludge or wastewater into water in the state, the permittee shall notify the appropriate TCEQ regional office orally within one (1) hour following discovery; unless it is not reasonably possible to do so in which event the discharge shall be reported as soon as reasonably possible, but in no event later than twenty-four (24) hours from when the discharge occurred. The permittee shall also submit written notice, within 14 working days of the discharge to the Office of Compliance and Enforcement, Enforcement Division (MC 224). In addition, the permittee shall document the following information, keep the information on site, and submit the information to the appropriate regional office within 14 working days of becoming aware of such discharge. The written notification must include:
   (a) A description and cause of the discharge, including a description of the flow path to the receiving water body and an estimation of the volume discharged.
   (b) The period of discharge, including exact dates and times, and, if not corrected, the anticipated time the discharge is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the discharge.
   (c) If caused by a precipitation event(s), the date(s) of the event(s) and the rainfall amount(s) recorded from an on-site rain gauge.
   (d) Discharge monitoring analyses required by this permit.

4. In the event of a discharge of manure, sludge, or wastewater from a RCS or LMU during a chronic or catastrophic rainfall event or resulting from catastrophic conditions, the permittee shall orally notify the appropriate TCEQ regional office within one (1) hour of the discovery of the discharge; unless it is not reasonably possible to do so, in which event the discharge shall be reported as soon as reasonably possible, but in no event later than twenty-four (24) hours from when the discharge occurred. The permittee shall send written notification to the appropriate regional office within 14 working days.

5. Chronic Rainfall Discharge. In the event of a discharge of manure, sludge or wastewater from an RCS or LMU due to chronic rainfall, the permittee shall submit a report to the appropriate TCEQ regional office showing the CAFO records that substantiates that the overflow was a result of cumulative rainfall that exceeded the design rainfall event without the opportunity for dewatering, and was beyond the control of the permittee. After review of the report, if required by the executive director, the permittee shall have an engineering evaluation by a licensed Texas

professional engineer developed and submitted to the executive director. This requirement is in addition to the discharge notification requirement in this permit.

6. Impacts to Human Health or Safety, or the Environment. The permittee shall provide the following noncompliance notifications:
   (a) Any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Report of such information shall be provided orally or by e-mail or electronic facsimile transmission (FAX) to the TCEQ regional office within twenty-four (24) hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the TCEQ regional office and the Enforcement Division (MC 224) within five days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times. If the noncompliance has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance and to mitigate its adverse effects.
   (b) In the event the permittee discharges manure, sludge or wastewater other than as authorized in the permit, the permittee shall give twenty-four (24) hour oral, e-mail or fax notice and 5-day written notice to TCEQ as required by paragraph (a) above.

7. The permittee shall submit an annual report to the appropriate regional office and the Enforcement Division (MC 224) by February 15 of each year for the reporting period of January 1 to December 31 of the previous year. The report shall be submitted on forms prescribed by the executive director to include, but not limited to:
   (a) number and type of animals, whether in open confinement or housed under roof;
   (b) estimated total manure, sludge and wastewater generated during the reporting period;
   (c) total manure, sludge and wastewater land applied during the last 12 months on-site at the CAFO facility;
   (d) total manure, sludge or wastewater transferred to other persons during the reporting period;
   (e) total number of acres for land application under the control of the permittee and all 3rd party acreage;
   (f) summary of discharges of manure, sludge or wastewater from the production area that occurred during the reporting period including dates, times, and approximate volume;
   (g) a statement indicating that the CNMP/NMP/NUP, under which the CAFO is operating, was developed and approved by a certified nutrient management specialist;
   (h) a copy of the initial soil analysis for each new LMU, regardless of whether

manure, sludge or wastewater has been applied;

(i) soil monitoring reports of all soil samples collected in accordance with the requirements of this permit;

(j) groundwater monitoring reports if required by the executive director; and

(k) any other information requested by the executive director.

8. The permittee shall furnish to the appropriate regional office and the Enforcement Division (MC 224) soil testing analysis of all soil samples within 60 days of the date the samples were taken in accordance with the requirements of this permit.

## IX. Standard Permit Conditions

A. The permittee has a duty to comply with all permit conditions. Failure to comply with any permit condition is a violation of the permit and statutes under which it was issued and is grounds for enforcement action, for permit amendment, revocation or suspension, or for denial of a permit renewal application or an application for a permit for another facility.

B. The permittee must apply for an amendment or renewal before the expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. Authorization to continue such activity terminates upon the effective denial of said permit.

C. It is not a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the permit conditions.

D. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation which has a reasonable likelihood of adversely affecting human health or the environment.

E. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) installed or used by the permittee to achieve compliance with the permit conditions. Proper operation and maintenance also includes adequate laboratory and process controls, and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the permit conditions.

F. The permittee shall furnish any information, at the request of the Executive Director, that is necessary to determine whether cause exists for revoking, suspending, or terminating authorization under this permit. The requested information must be provided within a reasonable time frame and in no case later than 30 days from the date of the request.

G. The permittee shall give notice to the Executive Director before physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements.

H. Authorization from the commission is required before beginning any change in the permitted facility or activity that would result in noncompliance with other permit requirements.

I. Inspection and entry shall be allowed under Texas Water Code, Chapters 26-28, Health and Safety Code, §§361.032-361.033 and §361.037, and 40 Code of Federal Regulations (CFR) §122.41(I). The statement in Texas Water Code, §26.014 that the commission entry of a facility shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection is not grounds for denial or restriction of entry to any part of the facility, but merely describes the commission's duty to observe appropriate rules and regulations during inspection.

J. Standard monitoring requirements

1. Samples required by this permit shall be collected and measurements shall be taken at times and in a manner so as to be representative of the monitored discharge or activity. Samples shall be delivered to the laboratory immediately upon collection, in accordance with any applicable analytical method and required maximum holding time. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§319.11 - 319.12. Measurements, tests and calculations shall be accurately accomplished in a representative manner.
2. Records of monitoring activities must include:
   (a) the date, time, and place of sample or measurement;
   (b) the identity of any individual who collected the sample or made the measurement;
   (c) the chain-of-custody procedures used to maintained sample integrity from sample collection to laboratory delivery;
   (d) the date and time of laboratory analysis;
   (e) the identity of the individual and laboratory who performed the analysis;
   (f) the technique or method of analysis; and
   (g) the results of the analysis or measurement and quality assurance/quality control records.
3. The permittee shall ensure that properly trained and authorized personnel monitor and sample the soil or wastewater related to any permitted activity.

K. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly shall be reported to the executive director as promptly as possible.

L. A permit may be transferred only according to the provisions of 30 TAC §305.64 (relating to Transfer of Permits) and 30 TAC §305.97 (relating to Action on Application for Transfer).

M. PPPs, reports, and other information requested or required by the Executive Director shall be signed in accordance with the requirements of 30 TAC §305.128 (relating to Signatories to Reports).

N. A permit may be amended, suspended and re-issued, or revoked for cause. The filing of a request by the permittee for a permit amendment, suspension and re-issuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

O. A permit does not convey any property rights of any sort or any exclusive privilege.

P. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date.

Q. If the permittee becomes aware that he/she failed to submit any relevant facts in a permit application, or submitted incorrect information in an application, or in any report to the executive director, the permittee shall promptly submit such facts or information.

R. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code, §§26.136, 26.212, and 26.213, for violations including but not limited to the following:

1. negligently or knowingly violating Clean Water Act (CWA) §§301, 302, 306, 307, 308, 318, or 405 or any condition or limitation implementing any sections in a permit issued under CWA §402, or any requirement imposed in a pretreatment program approved under CWA §402(a)(3) or §402(b)(8);
2. falsifying, tampering with, or knowingly rendering inaccurate any monitoring device or method required to be maintained under a permit; or
3. knowingly making any false statement, representation, or certification in any record or other document submitted or required to be maintained under a permit, including monitoring reports or reports of compliance or noncompliance.

S. The permittee shall comply with all applicable rules and regulations of the commission, including 30 TAC 321, Subchapter B.

T. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:

1. Violation of any terms or conditions of this permit;
2. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
3. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

U. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.

V. In accordance with the Texas Water Code § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.

W. The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

X. Notice of Bankruptcy.

1. Each permittee shall notify the executive director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
   (a) the permittee;
   (b) an entity (as that term is defined in 11 USC, §101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or
   (c) an affiliate (as that term is defined in 11 USC, §101(2)) of the permittee.
2. This notification must indicate:
   (a) the name of the permittee;
   (b) the permit number(s);
   (c) the bankruptcy court in which the petition for bankruptcy was filed; and
   (d) the date of filing of the petition.

X. **Special Provisions**

A. RCS Modifications.

1. The permittee shall increase the size of RCS #2 to meet the total required capacity listed on page 1 of this permit. Modifications shall comply with Section VII.A.3 of this permit.

The table below indicates the minimum volume allocations for each Retention Control Structure (RCS):

Treatment Pond and RCS #1 and #2 act in-series.

| Volume Allocations for RCSs (Acre-feet) | | | | | | |
|---|---|---|---|---|---|---|
| | Design Rainfall Event Runoff | Process Generated Wastewater | Minimum Treatment Volume | Sludge Accumulation | Water Balance | Total Required Capacity |
| RCS #1&2 | 39.9 | 2.8 | 0 | 1.4 | 9.8 | 53.9 |
| RCS #3 | 10.4 | 0 | 0 | 1.2 | 1.9 | 13.5 |
| RCS #4 | 5.1 | 0 | 0 | 0 | 0.8 | 5.9 |
| Treatment | 0 | 0 | 3.5 | 2.8 | 0 | 6.3 |

2. Compliance Schedule. All RCS modifications required by this permit shall be completed within 180 days after the issuance date of this permit and prior to exceeding 2,000 head of confined dairy cows. Upon written request to the TCEQ Regional Office, the Executive Director may grant an extension to the 180 day requirement. However, all modifications must be completed prior to exceeding 2,000 head of confined dairy cows. All buffers in LMUs will be completed and compliant with NRCS Code standards upon issuance of this permit. No application of manure, sludge or wastewater can take place on an LMU unless buffer requirements are met.

3. The RCS management plan for existing RCSs shall be developed and implemented upon issuance of this permit except for those RCSs that operate in series and for which capacity expansion is required under X.A.1. above. Once all construction and modifications are completed, the RCS management plan will be modified to reflect the new volumes and implemented within 30 days.

B. Future Revisions to Bosque River Total Maximum Daily Load (TMDL). The permittee is hereby placed on notice that this permit may be amended by the Texas

Commission on Environmental Quality in order to make the terms and conditions of this permit consistent with any revisions to the Bosque River TMDL, the associated Implementation Plan, or with any revisions to federal regulations.

C. The permittee shall submit the following records to the TCEQ Regional Office and the Enforcement Division (MC-224) annually, in conjunction with the annual report required by Section VIII.B.7 of this permit:

1. date of manure, sludge or wastewater application to each LMU;
2. location of the specific LMU and the volume applied during each application event;
3. acreage of each individual crop on which manure, sludge or wastewater is applied;
4. basis for and the total amount of nitrogen and phosphorus applied per acre to each LMU, including sources of nutrients other than manure, sludge or wastewater and on a dry weight basis;
5. weather conditions, such as temperature, precipitation, and cloud cover, during the land application and 24 hours before and after the land application;
6. annual nutrient analysis for at least one representative sample of irrigation wastewater, one representative sample of sludge, and one representative sample of manure for total nitrogen, total phosphorus, and total potassium. If both slurry from freestall barns and open lot solids are land applied a representative sample of each must be submitted; and
7. any measurements of sludge accumulations as required in each RCS.

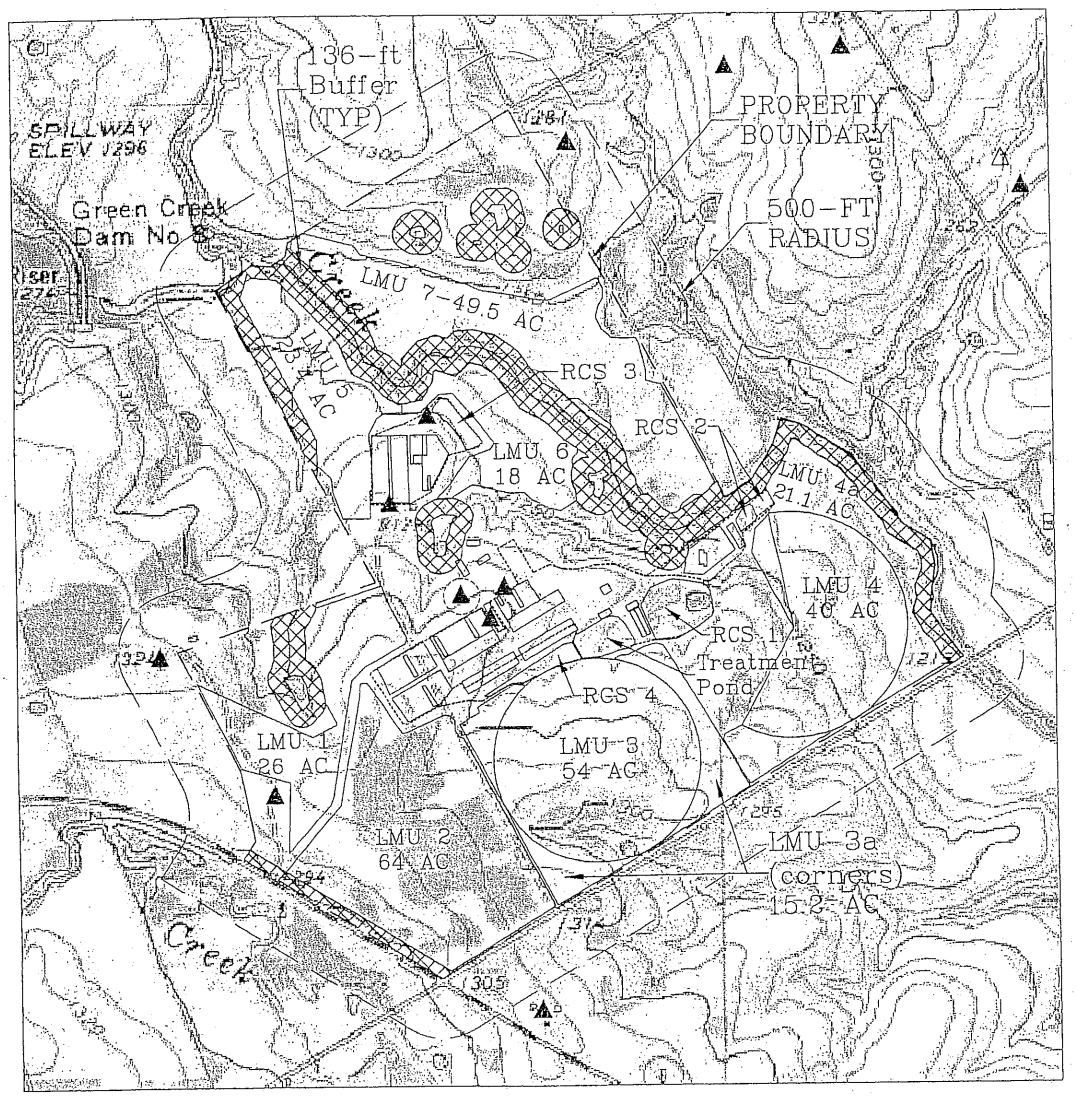
D. Manure includes slurry from freestall barns, solids from open lots, settling basin solids, bedding, compost, feed, and other raw materials commingled with feces and/or urine. If slurry, compost or settling basin solids are being land applied an annual sample analysis must be provided along with analysis for other manure solids and wastewater. Notification of the region is not required for the removal of the settling basin solids or slurry.

E. Slurry removed from freestall barns must be stored within the drainage area of an RCS, and the storage area must be large enough to prevent overflow into settling basins and/or RCSs. Any overflow of these storage basins shall be recorded in the PPP and notification shall be provided to the regional office within 30 days. Based on review of the information this permit may be formally amended to require additional controls or other requirements.

F. The table below describes the buffers that the permittee is required to install and maintain according to the NRCS practice standards in the referenced code. The map in Attachment B specifically describes the location and distance requirements for all buffers. Changes in land use can result in changes in buffer requirements.

| LMU # | Land Use | Vegetative buffer setback (feet) | NRCS Code 393 Filter Strip flow length range (feet) | NRCS Code 601 Vegetative Barrier flow length range (feet) | NRCS Code 332 Contour Buffer Strips (number and width) |
|---|---|---|---|---|---|
| 1 | Coastal Bermudagrass | 100 | 36 | None | N/A |
| 2 | Coastal Bermudagrass | 100 | 36 | None | N/A |
| 3 | Coastal Bermudagrass | None | None | None | N/A |
| 3a | Coastal Bermudagrass | None | None | None | N/A |
| 4 | Coastal Bermudagrass | None | None | None | N/A |
| 4a | Coastal Bermudagrass | 100 | 36 | None | N/A |
| 5 | Coastal Bermudagrass | 100 | 36 | None | N/A |
| 6 | Coastal Bermudagrass | 100 | 36 | None | N/A |
| 7 | Coastal Bermudagrass | 100 | 36 | None | N/A |

# ATTACHMENT A
# SITE MAP

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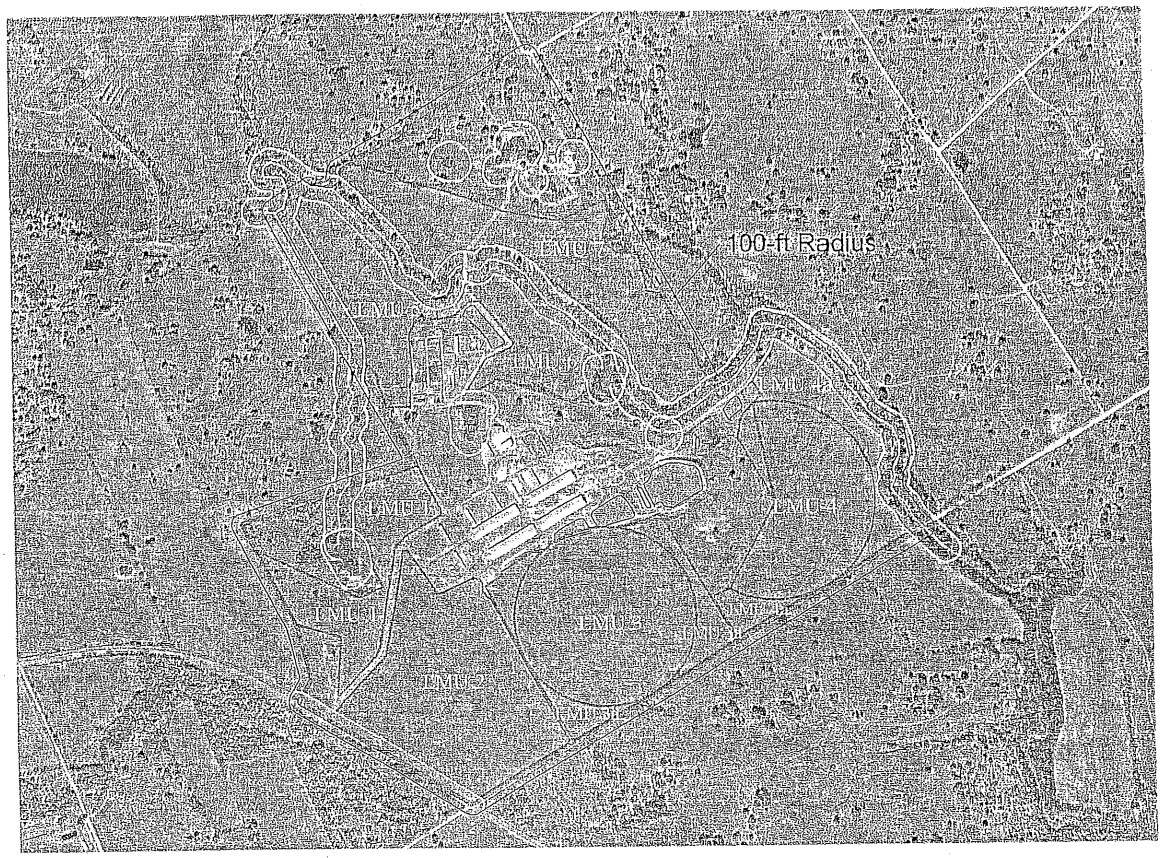
TCEQ Wastewater Permitting

MAP SOURCE:
TOPO! NATIONAL GEOGRAPHIC SEAMLESS TOPOGRAPHIC QUADRANGLE MAPS, 2002. DUBLIN AND ALEXANDER QUADRANGLES.

| | | |
|---|---|---|
| HIDDEN VIEW DAIRY<br>DUBLIN, TEXAS<br>ERATH COUNTY | SITE MAP<br>FIGURE 4.3<br>PAGE 11 REVISED 6/21/2006 | Land Application Area<br>ENVIRO AG<br>ENGINEERING, INC.<br>Enviro-Ag Engineering, Inc.<br>ENGINEERING CONSULTANTS<br>702 QUAIL CREEK DRIVE<br>AMARILLO, TEXAS 79124<br>TEL (806) 353-6123 FAX (806) 353-4132 |

ATTACHMENT B
LAND APPLICATION AREAS

## Hidden View Dairy - TPDES #03197




Notes:
1. Interior roads are flat, two-track roads - no adjacent ditches.
2. Freshwater ponds and waterways have 136-ft buffers, as shown.
3. Ponds shown on USGS map in pivot areas were filled in when pivots were installed.

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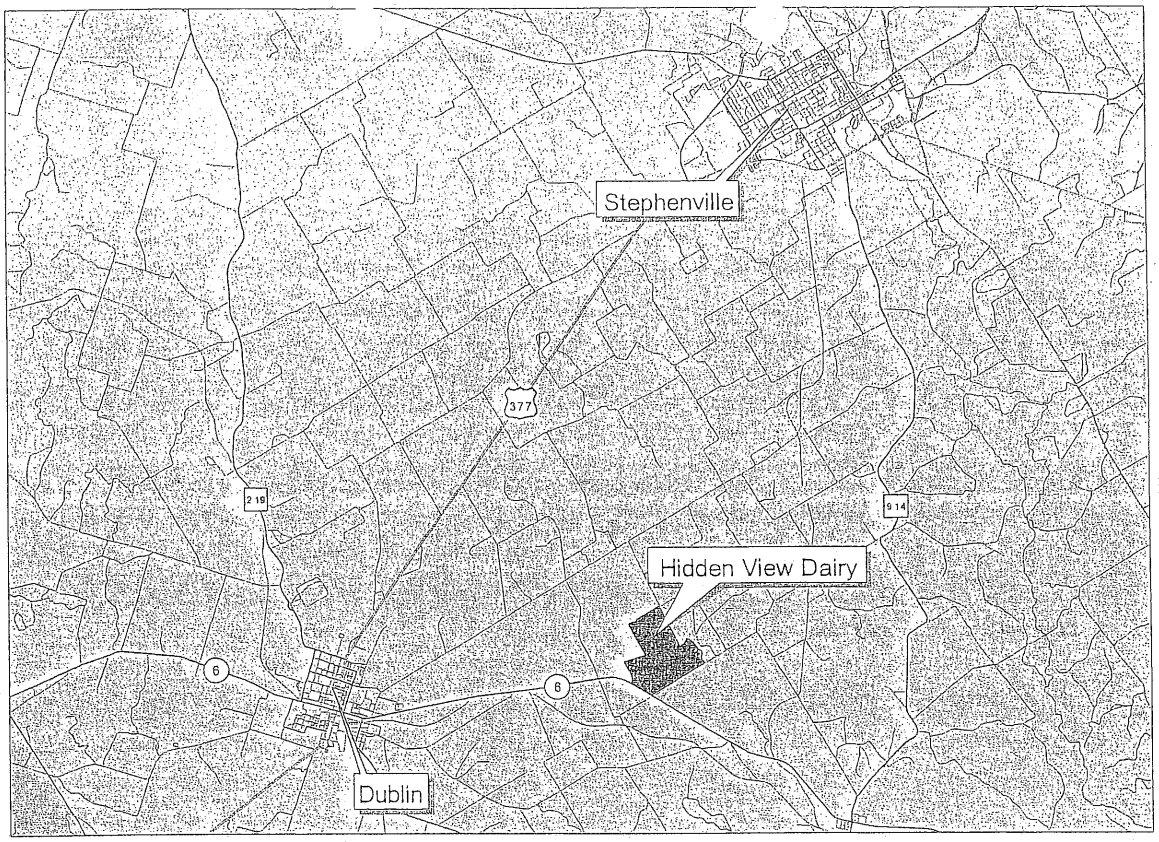
ENVIRO-AG ENGINEERING INC

FSA AERIAL PHOTOGRAPH
FIGURE 10.1
PAGE 57

As of 3/1/06
Map approved by TCEQ 3/9/06

ATTACHMENT C
VICINITY MAP




Rivers
Property
Roads
Primary road with limited access
Primary road
Secondary and connecting road
Access ramp
Ferry crossing
Local Roads

N
W E
S

2 0 2 4 Miles



| | | |
|---|---|---|
| Hidden View Dairy<br>Dublin, Texas<br>Erath County | Vicinity Map<br>Figure 4.1<br>Page 9 Revised 3/17/2006 | ENVIRO-AG ENGINEERING, INC<br>Engineering Consultants<br>702 Quail Creek Drive<br>Amarillo, Texas 79124<br>806-353-6123; Fax: 806-353-4132<br>www.enviroag.com |

# FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

| | |
|---|---|
| Permit No.: | WQ0003197000 |
| Owner: | Hidden View Dairy, a Texas general partnership |
| Regulated Activity: | Concentrated Animal Feeding Operation; Dairy |
| Type of Application: | Major Amendment |
| Request: | Air & Water Quality Authorization |
| Authority: | Federal Clean Water Act - Section 402; Texas Water Code §26.027; 30 Texas Administrative Code (TAC) Chapters 39, 305, and 321 Subchapter B; Section 382.051 of the Texas Clean Air Act and Commission Policies and Environmental Protection Agency Guidelines |

## I. EXECUTIVE DIRECTOR'S RECOMMENDATION

The Executive Director has made a preliminary decision that this proposed permit, if issued, meets all statutory and regulatory requirements. The proposed permit shall be issued for a five year term in accordance with 30 Texas Administrative Code Chapter 305.

## II. REASON FOR PROPOSED PROJECT

The applicant has applied to the Texas Commission on Environmental Quality (TCEQ) for a major amendment of Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0003197000 for a Concentrated Animal Feeding Operation (CAFO) to authorize the permittee to expand an existing dairy facility from 2,000 head to a maximum of 3,000 total head, of which 2,500 head are milking cows.

## III. PROJECT DESCRIPTION AND LOCATION

Maximum Capacity: 3,000 total head, of which 2,500 head are milking cows
Land Management Units (LMUs) (acres): LMU#1 - 26, LMU#2 - 64, LMU#3 - 54, LMU#3a - 15.2, LMU#4 - 40, LMU#4a - 21.1, LMU#5 - 23.4, LMU#6 - 18, LMU#7 - 49.5.

The table below indicates the minimum volume allocations for each Retention Control Structure (RCS):

Treatment Pond and RCS #1 and #2 act in-series.

| Volume Allocations for RCSs (Acre-feet) | | | | | | |
|---|---|---|---|---|---|---|
| | Design Rainfall Event Runoff | Process Generated Wastewater | Minimum Treatment Volume | Sludge Accumulation | Water Balance | Total Required Capacity |
| RCS #1&2 | 39.9 | 2.8 | 0 | 1.4 | 9.8 | 53.9 |
| RCS #3 | 10.4 | 0 | 0 | 1.2 | 1.9 | 13.5 |
| RCS #4 | 5.1 | 0 | 0 | 0 | 0.8 | 5.9 |
| Treatment | 0 | 0 | 3.5 | 2.8 | 0 | 6.3 |

The volume allocations are determined using Natural Resource Conservation Service standards, American Society of Agricultural Engineers standards, and/or site specific data submitted in the permit application.

The table below compares present and proposed RCS pond requirements. In evaluating the effect of the permit requirements on this CAFO related to RCS size the table demonstrates a large increase in the design storm event storage for the RCSs receiving contact rainfall run-off (RCS 1+2 in series and RCS 3). The treatment pond does not receive rainfall run-off and rainfall run-off from RCS 4 is not contact wastewater. Specifically in RCS 1+2 in series there is a 127% increase in design storm storage volume. RCS 3 has a 206% increase in design storm storage. These increases are a result of the 10 day storm event requirement and the increase in the surface area controlled by the RCS. For RCS 1+2 in series the surface drainage area is increasing from 31.99 acres to 42.9 acres and for RCS 3 the surface drainage area is increasing from 6.8 acres to 11.2 acres. The design storm storage in RCS 4 is again for non-contact water runoff and it has decreased 32% because of decrease in the surface drainage area from 8.16 acres to 5.3 acres. The minimum treatment volume and sludge volume in the treatment pond is decreasing because the CAFO has made an operation change from a flushed freestall barn to vacuum scrape. The volatile solids entering the treatment pond are greatly reduced as a result. It is also important to note the increase in operating volume in the new permit requirements. In RCS 1+2 in series the operating volume is increased 5.51 ac-ft (78%) and where there was no calculated operating volume in RCS 3 and 4 before there is now 1.9 and 0.8 acre-feet respectively. The increased operating volume is reflective of the RCS Management Plan requirements and provides protection of the design

storm volume availability for catastrophic and chronic rainfall event.

| | Treatment Pond | | RCS 1+2 | | RCS 3 | | RCS 4 | |
|---|---|---|---|---|---|---|---|---|
| | Present | New | Present | New | Present | New | Present | New |
| Design Storm Event | | | 17.56 | 39.9 | 3.40 | 10.4 | 7.50 | 5.1 |
| Operating Volume | | | 7.09 | 12.6 | 0 | 1.9 | 0 | .8 |
| Minimum Treatment Volume | 11.93 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sludge | 3.94 | 2.8 | 2.01 | 1.4 | 0 | 1.2 | 0 | 0 |
| Total | 15.90 | 6.3 | 26.66 | 53.9 | 3.40 | 13.5 | 7.50 | 5.9 |

* When construction is completed the volume might be larger.

Location: The facility is located on the northwest side of County Road 522, approximately one-quarter mile northeast of the intersection of County Road 522 and State Highway 6 in Erath County, Texas. Latitude: 32° 05' 47"N Longitude: 98° 15' 06"W.

Drainage Basin: The facility is located in the drainage area of the North Bosque River in Segment No. 1226 of the Brazos River Basin.

## IV. SUMMARY OF CHANGES FROM EXISTING AUTHORIZATION

The proposed permit includes changes based on revisions to 30 Texas Administrative Code Chapter 321, Subchapter B. The permittee is requesting to increase from 2,000 head to 3,000 head, of which 2,500 head are milking cows in RCS capacity from 28.46 acre-feet to 55.40 acre-feet to accommodate the required margin of safety. There is also an increase in the required operating volume from 7.09 acre-feet to 15.3 acre-feet to achieve the goals of the RCS Management Plan and accommodate process generated wastewater and normal rainfall run-off. Furthermore, land application of manure, sludge, and wastewater must be in accordance with a phosphorus based nutrient management plan. For additional changes from the existing authorization, see Attachment 1.

## V. WATER QUALITY PROTECTION

Although the proposed permit is allowing an increase from 2,000 head to 3,000 head, this proposed permit includes many requirements not required by the existing authorization. As a result, this proposed permit is more stringent. The new requirements can be categorized based on their intended goal: reduce the potential for discharges, minimize the nutrient loading to land and surface water, and increase the oversight of operational activities by the TCEQ.

The following requirements are designed to reduce the potential for discharges:

1. The design rainfall event, at which time the CAFO is authorized to discharge, has been increased from a 25 year/24 hour rainfall event (7.3 inches) to a 25 year/10 day rainfall event (12 inches). This is approximately a 60% increase to the design rainfall event which will result in an increase of 26.94 acre-feet in the required RCS design storm storage capacity. This design storm storage capacity results in a larger portion of the structure above the 25 year/10 day pond marker that should remain dry, except during chronic or catastrophic rainfall events. The application also increases process water storage from 21 to 30 days in the design calculations. The increased storage capacity is expected to reduce the potential for discharges from the RCSs.

2. A RCS management plan is required to be implemented. This plan must establish expected end of the month water storage volumes for each RCS. These maximum levels are based on the design assumptions used to determine the required size of the RCS. This plan assures the permittee will maintain wastewater volumes within the design capacity of the structures. The permittee must document and provide an explanation for all occasions where the water level exceeds the expected end of the month storage volumes. By maintaining the wastewater level at or below the expected monthly volume, the RCS will be less likely to encroach into the volume reserved for the design rainfall event and/or discharge during smaller rainfall events. This has resulted in an increased operating volume in RCS #1&2 and RCS #3. Operating volumes in RCS #1&2 of 12.6 acre-feet and RCS #3 of 1.9 acre-feet exceed calculations of the maximum 30 day inflow minus evaporation in the water balance.

3. The wastewater level in each RCS must be recorded daily. This requirement will assist the permittee in the implementation of the RCS management plan and will provide a visual indication of compliance.

4. The pond marker must have one foot increments. This requirement identifies the level of wastewater storage to assist the permittee in the implementation of the RCS management plan. It also acts as an enforcement tool for TCEQ to determine compliance with the RCS management plan.

5. The amount of sludge in each RCS must be maintained at or below the design sludge volume. Previously, sludge had to be maintained at or below 50% of the treatment capacity, and sludge accumulation was not expressly regulated in RCSs without treatment capacity. Excessive sludge accumulation can reduce the available wastewater storage volume. This more stringent requirement ensures that sufficient storage capacity is available for containment of the design wastewater volume and design rainfall event in all RCSs. Proper sludge management will reduce overflows associated with insufficient wastewater storage capacity. The requirement for annual measurement of the sludge accumulation volume beginning in year 3 of this permit will ensure that sludge accumulation does not encroach on the operating volume or margin of safety.

6. Land application is prohibited between the hours of 12 a.m. and 4 a.m. This provision reduces the potential of irrigation related discharges associated with equipment malfunctions.

The following requirements are designed to help minimize the nutrient loading to land and the potential for nutrient loading to surface water:

1. The land application of manure, sludge or wastewater must be in accordance with a Nutrient Management Plan (developed by a certified nutrient management specialist, based on United States Department of Agriculture/Natural Resource Conservation Service (NRCS) Practice Standard 590) which provides the permittee the necessary information to properly manage the amount, form, placement and timing for the application of nutrients to the LMU. The proposed permit requires a nutrient management plan to be implemented upon issuance of this permit. This plan involves a site specific evaluation of the land management unit to include soils, crops, nutrient needs and includes the phosphorus index tool. The phosphorus index is a site specific evaluation of the risk potential for phosphorus movement into watercourses. The risk potential is determined by site characteristics such as soil phosphorus level, proposed phosphorus application rate, application method and timing, proximity of the nearest field edge to a named stream or lake, soil permeability, and soil erosion potential. The application rates are adjusted according to the risk potential. The higher the risk potential, the lower the application rate. In determining the application rate, the nutrient management plan also evaluates the amount of nutrients needed for optimal crop production and then balances that need between the nutrients in the soils and nutrient source (i.e. manure, sludge or wastewater). Once the nutrients are in balance, there is minimal potential to have excess nutrients available to leave the site and affect water quality. The nutrient need is based on the most limiting nutrient which is phosphorus; thus a phosphorus application rate will be established for each individual LMU. This proposed permit requires all excess manure, sludge, and wastewater that cannot be land applied in accordance with the nutrient management plan to be removed (exported) from the

facility (see item #3 below for additional discussion on excess manure).

This plan determines the application rate based on phosphorus, whereas the previous land application rates were based on the nitrogen requirement of the crop. In general, when calculating the application rate for coastal bermudagrass, if all variables remain unchanged except the crop nutrient requirement, the phosphorus application rate will be approximately 40% less than the nitrogen application rate. This reduced application rate will lower the potential for land applied nutrients to enter surface water and increase the amount of excess manure to be managed off-site. Record keeping and reporting requirements, such as the amount of manure produced, amount of manure, sludge or wastewater land applied, soil sampling and analyses, and the amount of manure and sludge removed from the facility, can be used to verify compliance with the nutrient management plan.

2. In addition to the requirements for implementation of a nutrient management plan, the permittee must operate under a Comprehensive Nutrient Management Plan (CNMP) certified by the Texas State Soil and Water Conservation Board. The CNMP must be developed by a qualified individual(s) in accordance with Texas State Soil and Water Conservation Board regulations. The CNMP must be implemented by December 31, 2006. The CNMP is a whole farm plan that addresses nutrient management from the origin in the feed rations to final disposition. The CNMP considers all nutrient inputs, onsite use and treatment, outputs, and losses. Inputs include animal feed, purchased animals, and commercial fertilizer. Outputs include animals sold, harvested crops removed from facility, and manure and sludge removed from the facility. Losses include volatilization, stormwater runoff, and leaching.

3. Manure, sludge or wastewater in excess of the amount allowed by the nutrient management plan must be delivered to a composting facility authorized by the executive director, delivered to a permitted landfill, beneficially used by land application to land located outside of the major sole source impairment zone, or provided to operators of third-party fields for beneficial use subject to stringent land application requirements and testing. By requiring specific outlets for excess manure, sludge or wastewater, this permit provision limits unregulated use of manure, sludge or wastewater within the watershed. Exported use requires additional record-keeping to document how excess manure is used and provides a mechanism to track each permittee's contribution toward the 50% voluntary removal goal in the Bosque River Total Maximum Daily Load (TMDL).

4. Additional conservation practices have been imposed on LMUs adjacent to water in the state. These conservation practices include a 100 foot vegetative buffer and NRCS Code 393 filter strips. Site specific conditions and NRCS practice standards specify which conservation practices, in addition to the required 100 foot vegetative buffer, must be implemented. The conservation practices reduce erosion, suspended solids and nutrients in runoff from LMUs. This will improve the quality of stormwater runoff prior to entering water in the state. See the table below for the specific buffer requirements for this permit.

Buffer Requirements

| LMU # | Land Use | Vegetative buffer setback (feet) | NRCS Code 393 Filter Strip flow length range (feet) | NRCS Code 601 Vegetative Barrier flow length range (feet) | NRCS Code 332 Contour Buffer Strips (number and width) |
|---|---|---|---|---|---|
| 1 | Coastal Bermudagrass | 100 | 36 | None | N/A |
| 2 | Coastal Bermudagrass | 100 | 36 | None | N/A |
| 3 | Coastal Bermudagrass | None | None | None | N/A |
| 3a | Coastal Bermudagrass | None | None | None | N/A |
| 4 | Coastal Bermudagrass | None | None | None | N/A |
| 4a | Coastal Bermudagrass | 100 | 36 | None | N/A |
| 5 | Coastal Bermudagrass | 100 | 36 | None | N/A |
| 6 | Coastal Bermudagrass | 100 | 36 | None | N/A |
| 7 | Coastal Bermudagrass | 100 | 36 | None | N/A |

5. The table below illustrates numbers from the permittee's nutrient management plan to compare the crop requirement for Phosphorus versus the actual pounds applied. The pounds applied are significantly less. Of further note because the plan is based on crop removal, and in some LMUs over 200 ppm soil test Phosphorus the nutrient utilization plan (NUP) requirements, even the maximum allowable is significantly less than crop requirements. In every LMU the permittee is planning application below the maximum allowable. In LMUs 3, 3a, and 5 the permittee is planning application below the maximum allowable under the NUP. NMPs/NUPs are routinely updated and values are subject to change.

Nutrient Application

| LMU # | Soil Test P (ppm) | Crop P2O5 Required (pounds/ac.) | Pounds Applied P2O5 (pounds/ac.) | Percentage of Maximum Allowable |
|---|---|---|---|---|
| 1 | 65 | 125 | 32 | 49% |
| 2 | 50 | 170 | 46 | 50% |
| 3 | 217 | 170 | 22 | 34% |
| 3a | 217 | 125 | 35 | 90% |
| 4 | 156 | 170 | 65 | 71% |
| 4a | 156 | 125 | 39 | 52% |
| 5 | 225 | 125 | 21 | 38% |
| 6 | 64 | 125 | 32 | 49% |
| 7 | 213 | 125 | 47 | 90% |

The following requirements allow for increased oversight of operational activities by the TCEQ:

1. The permittee must provide a report to the TCEQ to substantiate a chronic rainfall discharge. After review of the report, if required by the executive director, the permittee must have an engineering evaluation by a licensed Texas professional engineer developed and submitted to the executive director. The report and engineering evaluation may be used to verify that the facility was maintained and operated according to the permit conditions. Information reviewed may include rainfall records at the CAFO, RCS wastewater levels preceding the discharge, irrigation records, and the current sludge volume. This requirement allows for closer scrutiny by TCEQ for discharges resulting from chronic conditions and provides documentation for enforcement of unauthorized discharges. The current authorization does not require chronic discharge documentation or an engineering evaluation.

2. The TCEQ regional office must be notified ten (10) working days prior to annual soil sample collection activities. This allows the TCEQ to observe sample collection and/or obtain split samples for duplicate analysis to help assure that data collected is credible to support application rates in the nutrient management plan. The current

authorization does not require notification of soil sample collection activities.

3. The TCEQ regional office must be notified prior to clean out of sludge in the RCSs.

4. Annual soil samples must be collected by one of the following persons: the NRCS; a certified nutrient management specialist; the Texas State Soil and Water Conservation Board; the Texas Cooperative Extension; or an agronomist or soil scientist on full-time staff at an accredited university located in the State of Texas. This ensures that samples are collected by individuals who are knowledgeable about soil sampling techniques and sample preservation. The current authorization does not specify who must collect the annual soil samples.

5. Some of the land application records maintained by the permittee must be submitted to the TCEQ annually. These records include date of manure, sludge or wastewater application to each LMU, location of the specific LMU and the volume applied during each application event, acreage of each individual crop on which manure, sludge or wastewater is applied, basis for and the total amount of nitrogen and phosphorus applied per acre to each LMU, including sources of nutrients other than manure, sludge or wastewater on a dry basis, weather conditions, such as temperature, precipitation, and cloud cover, during the land application and 24 hours before and after the land application, and annual nutrient analysis for at least one representative sample of irrigation wastewater, slurry and other manure for total nitrogen, total phosphorus, and total potassium. This will assist the TCEQ in monitoring compliance with land application requirements of the permit.

Although the proposed permit authorizes an expansion from 2,000 head to 3,000 head (of which 2,500 will be milking cows), the conditions being proposed in this permit are anticipated to significantly reduce the potential for pollutants entering receiving waters. These reductions are from limiting the potential for RCS overflows and managing land application of nutrients to LMUs. The operator is implementing dairy management practices that significantly reduce the nutrient loading to the wastewater (e.g., vacuuming of manure), the volumetric loading to the retention control structures (e.g., covered freestall barns; vacuuming rather than flushing), and the application of phosphorus compounds to land management units (e.g., nutrient utilization plan with phosphorus reduction component). Regardless of the number of head, this permit requires all export manure and sludge that cannot be land applied in accordance with the nutrient management plan to be removed from the facility (i.e. composting, landfill, outside of the watershed, or third-party fields). The application of export manure to third-party fields is now subject to stringent controls that include soil sampling and phosphorus-based application rates. The remaining manure or sludge and associated nutrients, if land applied to LMUs, must be managed according to the nutrient management plan, which restricts the land application rate based on site specific risk potential and the crop phosphorus requirement. The wastewater generated by the facility is

retained and managed in RCSs that must be designed to exceed the federal sizing requirement. The RCSs are required to be designed with a margin of safety, which requires a larger portion of the RCSs to remain dry (i.e. the distance between the normal wastewater operating level and the spillway). This permit requires RCSs to accommodate rainfall and runoff from a 25 year/10 day rainfall event rather than the 25 year/24 hour rainfall event specified in Federal regulations. This results in approximately a 60% increase in the required storage capacity for the design storm event and is intended to reduce the potential for discharges from RCSs. The normal wastewater operating level is required to be closely monitored and maintained by implementation of the RCS management plan and increased recordkeeping by the permittee. The dry storage area is available to capture rainfall from extended periods of wet weather without overflow. In the unlikely event of an overflow, the permittee must provide records to the TCEQ to prove that the overflow was unavoidable. If the overflow is determined to be unauthorized, this documentation provides TCEQ additional tools to initiate enforcement proceedings. These permit requirements, best management practices, and increased management and TCEQ oversight will protect water quality, when properly implemented.

## VI. 303(d) LISTING and TOTAL MAXIMUM DAILY LOAD (TMDL)

The facility for this permit action is located within the watershed of the North Bosque River in Segment 1226 of the Brazos River Basin. The designated uses and dissolved oxygen criterion as stated in Appendix A of the Texas Surface Water Quality Standards (30 TAC §307.10) for Segment 1226 are contact recreation, public water supply, high aquatic life use, and 5.0 mg/L dissolved oxygen.

Segment 1226 is currently listed on the 2004 State's inventory of impaired and threatened waters (the 2004 Clean Water Act Section 303(d) list) for bacteria. The North Bosque River (Segments 1226 and 1255) was included in the 1998 Texas Clean Water Act 303(d) List and deemed impaired under narrative water quality standards related to nutrients and aquatic plant growth.

Segment No. 1226 is included in the agency's document *Two Total Maximum Daily Loads for Phosphorus in the North Bosque River,* adopted by the Commission on February 9, 2001 and approved by EPA on December 13, 2001. *An Implementation Plan for Soluble Reactive Phosphorus in the North Bosque River Watershed* (TMDL Implementation Plan) was approved by the Commission on December 13, 2002, and approved by the Texas State Soil and Water Conservation Board on January 16, 2003.

The TMDL for the North Bosque River, Segments 1226 and 1255, identified the total amount of phosphorus that could be introduced into these segments, ie. the load. Phosphorus load from two categories of sources was modeled to calculate the expected reductions in phosphorus load to meet instream water quality standards. Point sources included

wastewater treatment plants; non-point sources included all other sources, such as CAFOs. The TMDL called for an average 50% reduction in the average concentration of soluble reactive phosphorus across river index stations and was to be achieved by a 50% reduction in soluble reactive phosphorus loadings from both point sources and non-point sources. The TMDL was developed assuming implementation of specific best management practices. This set of best management practices represents one way to achieve the water quality targets in stream and the overall reduction goal of the TMDL.

The TMDL was approved with the understanding that an adaptive management approach was an appropriate means to manage phosphorus loading to the stream. The TMDL Implementation Plan emphasized this approach to achieve the phosphorus reductions targeted in the TMDL. Adaptive management envisions adjustment of management practices over time as necessary to reach the target. The TMDL anticipated that, to control loading to the stream, dairy CAFO permittees would implement those best management practices which best addressed site-specific conditions. Accordingly, the TMDL is not directly tied to the number of animal units permitted in the watershed; it is instead tied to the amount of nutrients that may be land applied consistent with best management practices that ensure appropriate agricultural utilization of nutrients.

The provisions of this permit seek to reduce the amount of phosphorus and other pollutants discharged to water in the state from the CAFO. Primary management strategies for dairies, both voluntary and regulatory, were identified in the TMDL Implementation Plan which included: requiring phosphorus-based application rates when applying manure and sludge to LMUs; voluntarily implementing efforts to reduce the amount of phosphorus in dairy cow diets; and removing significant quantities of dairy-generated manure or sludge from the watershed for the production of compost, beneficial use on crops, or disposal. The permit application includes a nutrient management plan, which allocates the amount of nutrients to each LMU based on cropping patterns. The proposed permit requires a nutrient management plan to be implemented upon issuance of the permit and also specifies how the export manure will be managed. The voluntary phosphorus diet reductions may be implemented through consultations between a nutritionist and the permittee. Any such dietary phosphorus reductions will result in reduced phosphorus concentrations in manure. These strategies are facets of CNMPs; CNMPs are required for all dairy CAFOs in the major sole-source impairment zone.

The CNMP must consider manure phosphorus content, the LMU area available for land application based on phosphorus-rate application, and the amount of excess manure that would remain. It must also account for all pathways of manure use or disposal, which would include removal to compost facilities, transport to another watershed for land application, or land application at onsite LMUs. The proposed permit requires the permittee to develop and implement a CNMP by December 31, 2006. In the interim, the permittee must implement the nutrient management plan or nutrient utilization plan submitted with the permit

application and all subsequent updates to those plans.

These nutrient plans determine the nutrient application rate based on phosphorus, whereas the prior authorization (before implementation of the nutrient utilization plan) allowed land application rates based on the nitrogen requirement of the crop. In general, the phosphorus application rate will be approximately 40% less than the prior nitrogen based application rates. These reduced application rates, based on phosphorus requirement of the crop or crop removal rates, will lower the potential for land applied nutrients to enter surface water and increase the amount of export manure to be managed off-site. The implementation of these enhanced nutrient management practices within the watershed is expected to result in phosphorus load reduction consistent with the TMDL Implementation Plan.

Continuing education requirements in the proposed permit mandate that the operator be trained on management practices that are also consistent with the TMDL Implementation Plan regarding feed management and waste management practices.

The TMDL Implementation Plan recommends stringent requirements for RCSs, in order to reduce the potential for overflows. In response, several permit provisions have been proposed that are consistent with the TMDL Implementation Plan, which include:

1. RCSs must be designed to contain the volume associated with a 25 year/10 day rainfall event,
2. a permanent marker, graduated in one foot increments from the bottom of each RCS to the top of the spillway that will identify all the required volumes in that specific RCS,
3. a RCS management plan detailing procedures for proper operation and management of wastewater levels based on design and assumptions of monthly expected operating levels,
4. daily monitoring records of wastewater levels,
5. notification of discharges within one hour,
6. discharge sample analyses must be submitted to the TCEQ, and
7. a report of discharges must be submitted to the TCEQ regional office, documenting that overflows from cumulative rainfall events were beyond the permittee's control.

In addition, the September 15, 2003 White Paper, *Standards for Waste Retention Facilities in the North Bosque River Watershed*, states that "...some of the technical professionals working on this committee are convinced that a significant part of the dairy source loading as being from retention facilities." Although not directly quantifiable, it is expected that a significant phosphorus load reduction will occur as a result of these enhanced design standards. Not only will the increased capacity requirements result in load reductions, but the additional operation, maintenance, recordkeeping and reporting requirements will aid in achieving the water quality target for the North Bosque River.

The TMDL Implementation Plan recommends additional limitations or requirements are needed to manage irrigation and prevent excessive runoff. In response, the proposed permit includes the requirement for a CNMP (mentioned above), and when required a 136-foot wide vegetative buffer between application areas and a water in the state. The proposed permit also specifies that automatic irrigation shutdown requirements may be imposed and prohibits nighttime land application from midnight to 4:00 a.m.

The RCS storage capacity requirements, nutrient management practices, increased TCEQ oversight of operational activities, and requirements of the TMDL Implementation Plan, which are incorporated into the draft permit, are designed to reduce the potential for this CAFO to contribute to further phosphorus impairment and consequently other potential pollutants such as bacteria. Furthermore, it is anticipated the implementation of the primary management strategies and permit provisions will result in the reduction of soluble reactive phosphorus and achieve the reductions targeted in the TMDL. Attachment 2 outlines the proposed permit provisions and provides their purpose. The permit provisions are consistent with the approved TMDL and associated Implementation Plan that establishes measures for reductions in loadings of phosphorus (and consequently other potential pollutants) to the North Bosque River Watershed. Therefore, this permit is consistent with the requirements of the antidegradation implementation procedures in 30 Texas Administrative Code Section 307.5 (c)(2)(G) of the Texas Surface Water Quality Standards.

## VII. DRAFT PERMIT RATIONALE

### A. PERMIT CONDITIONS AND EFFLUENT LIMITATIONS

The following items were considered in developing the proposed draft permit:

1. The application received on January 27, 2004 and was followed by subsequent revisions
2. TCEQ Permit No. WQ0003197000 issued June 27, 1997
3. Interoffice Memorandum from the Water Quality Assessment Team, Water Quality Assessment Section, Water Quality Division, dated August 25, 2006
4. Interoffice Memorandum from the Water Quality Standards Team, Water Quality Assessment Section, Water Quality Division, dated April 27, 2006
5. TCEQ rules
6. Bosque River TMDL Implementation Plan
7. NRCS Animal Waste Management Field Handbook, Nutrient Management Practice Standard Code 590 and the Field Office Technical Guidance for Texas
8. ASABE Standards (ASAE D384.2 MAR05)
9. Environmental Protection Agency rules
10. Comment letter dated October 23, 2006 from permittee's representative

Manure, sludge or wastewater may only be discharged from a LMU or a properly designed, constructed, operated and maintained RCS into water in the state from this CAFO if any of the following conditions are met:

1. discharge of manure, sludge or wastewater resulting from a catastrophic condition other than a rainfall event that the permittee cannot reasonably prevent or control;
2. a discharge resulting from a catastrophic rainfall event from a RCS;
3. a discharge resulting from a chronic rainfall event from a RCS; or
4. a discharge resulting from a chronic rainfall event from a LMU that occurs because the permittee takes measures to de-water the RCS in accordance with the individual permit, relating to imminent overflow.

For a discharge resulting from a chronic rainfall event, the permittee shall submit a report to the appropriate TCEQ regional office that includes the CAFO records that substantiates that the overflow was a result of cumulative rainfall that exceeded the design rainfall event, without the opportunity for dewatering, and was beyond the control of the permittee. After review of the report, if required by the executive director, the permittee shall have an engineering evaluation by a licensed Texas professional engineer developed and submitted to the executive director.

All waste including any manure, bedding or feedwaste from the CAFO and any water contaminated by waste contact must be stored or utilized to comply with the permit and TCEQ Rules. The proposed permit satisfies the Environmental Protection Agency effluent limitation guidelines in 40 Code of Federal Regulations, Parts 412 and122.

40 Code of Federal Regulations Section 122.44 specifies that any requirements, in addition to or more stringent than promulgated effluent limitation guidelines, must be applied when they are necessary to achieve state water quality standards. Water quality based effluent limitations must be established when TCEQ determines there is a reasonable potential to cause or to contribute to an in-stream excursion above the allowable ambient concentration of a state numeric criterion. For CAFO discharges the TCEQ must consider:

1. existing controls on point and non-point sources of pollution;
2. variability of the pollutant in the effluent; and
3. dilution of the effluent in the receiving water.

In proposing this permit, the TCEQ addresses considerations 2. and 3. since continuous discharges are prohibited and effluent discharges are authorized only during catastrophic conditions or a chronic or catastrophic rainfall event from a RCS properly designed, constructed, operated and maintained. The effluent pollutant levels are variable and effluent is usually not discharged. Additionally, during these climatic events, water bodies receiving a contribution of CAFO wastewater should be significantly diluted by other rainfall runoff.

Consideration 1. requires permit controls on CAFO discharges which will result in the numeric criteria of the water quality standards being met, thus ensuring that applicable uses of water in the state are attained. The principal pollutants of concern include organic matter causing biochemical oxygen demand, the discharge of ammonia-nitrogen, phosphorus and fecal coliform bacteria. This permit requires discharges to be monitored for the pollutants of concern. Existing technology does not allow for practicable or economically achievable numeric effluent limitations at this time. The Environmental Protection Agency has not promulgated effluent

guidelines or numeric effluent limitations that would allow regular discharges of CAFO process wastewater or process-generated wastewater. The proposed permit addresses potential pollutant impacts through requirements including numerous narrative (non-numeric) controls on CAFO process wastewater and non-point sources of pollutant discharges associated with CAFOs. Setting specific water quality-based effluent limitations in this permit is not feasible (see 40 Code of Federal Regulations §122.44 (k)(3)). Instead, the proposed permit provides general and site specific provisions which are expected to result in compliance with water quality criteria and protection of attainable water quality as follows:

1. The approved recharge feature certification dated April 15, 2006 must be maintained in the onsite pollution prevention plan. The recharge feature certification describes the location of the CAFO relative to certain natural and artificial features that could result in adverse ground water impacts. Groundwater has the potential to resurface as surface water. Therefore, preventing impacts to groundwater also provides protection to surface water.

2. RCSs at the CAFO must be adequately lined and certified by a professional engineer; alternatively, certification must document a lack of hydrologic connection between wastewater in the RCS and groundwater. Groundwater has the potential to resurface as surface water. Therefore, preventing impacts to groundwater also provides protection to surface water. A liner certification, certified by a professional engineer, for each RCS was submitted with the application.

| | Liner Certification | Capacity Certification | |
|---|---|---|---|
| RCS | Date | Date | Volume (acre-feet) |
| Treatment Pond | August 2002 | April 1997 | 13.95 |
| RCS #1 | February 1995 | April 1997 | 78.98 |
| RCS #2 | February 1995 | April 1997 | 4.46 |
| RCS #3 | February 2003 | April 1997 | 5.59 |
| RCS #4 | August 2002 | April 1997 | 11.41 |
| Settling Basin (solids separator adjacent to RCS #2) | November 2005 | Not Required | |
| Settling Basin #2 (solids separator) | August 2005 | | |
| Settling Basin #3 (solids separator) | August 2005 | | |
| Upper Slurry Basin #1 | December 2005 | | |
| Slurry Basin | April 2002 | | |

3. RCS design criteria must include volumes for the design rainfall event, sludge, process generated wastewater, and treatment volume for the air standard permit to meet "best available technology economically achievable" and "best practicable control technology". These design criteria must be supplemented with a water balance analysis that demonstrates that wastewater can be sufficiently stored and that irrigation of the wastewater will not induce runoff or create tailwater. The application includes design calculations, certified by a professional engineer, which determine the design criteria for each RCS system. The proposed permit requires an increase in RCS capacity from 28.46 acre-feet to 55.40 acre-feet to accommodate the required margin of safety. There is also an increase in the required operating volume from 7.09 acre-feet to 15.3 acre-feet to achieve the goals of the RCS Management Plan and accommodate process generated wastewater and normal rainfall run-off.

4. Modified RCSs must maintain two vertical feet of material equivalent to construction materials between the top of the embankment and the structure's spillway to protect from overtopping the structure.

5. Recordkeeping and reporting requirements are designed to help ensure that the permittee complies with the permit provisions. Some of these requirements include daily records of RCS wastewater levels and measurable rainfall; weekly records of manure, sludge, and wastewater removed from the facility, inspections of control facilities and land application equipment; and monthly records of manure, sludge or wastewater land applied. The permittee is required to submit an annual report to the TCEQ which includes a subset of the permit recordkeeping requirements.

6. Discharge of wastewater from irrigation is prohibited, except a discharge resulting from irrigation events associated with imminent overflow conditions. Precipitation-related runoff from LMUs is allowed by the permit, when land application practices are consistent with a nutrient management plan or nutrient utilization plan.

7. Solid waste management provisions specify requirements which minimize adverse water quality impacts.

8. The entry of uncontaminated stormwater runoff into RCSs must be minimized. The site includes berms to both direct contaminated runoff into the RCSs and prevent uncontaminated stormwater runoff from entering the RCSs.

9. The permittee shall take all steps necessary to prevent any adverse effect to human health or safety, or the environment.

10. The permittee shall provide the following notifications:
    (a) Any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ, orally or by facsimile transmission within 24 hours and in writing within five days of becoming aware of the noncompliance.
    (b) Discharges resulting from a chronic or catastrophic rainfall event or catastrophic conditions must be reported orally within one hour of the discovery of the discharge and in writing within 14 working days.

Where a specific chemical pollutant does not have a water quality criterion and that pollutant is present in CAFO effluent at a concentration that has the reasonable potential to cause, or contribute to, an excursion above a narrative criterion in the state water quality standards, TCEQ must establish effluent limits, except as provided by 40 Code of Federal Regulations Section 122.44(k).

Nutrient pollutants of concern have narrative criteria and are discharged in CAFO wastewater. As described above, effluent limitations are not feasible at this time. Nutrient management has been addressed through the imposition of a three tiered approach, based on the soil phosphorus concentration.

For LMUs with a soil phosphorus concentration of less than 200 ppm in Zone 1 (0-6 inches depth if incorporated, 0-2 and 2-6 inches depth if not incorporated), a certified nutrient management plan is required by the permit. This plan is based on the NRCS Practice Standard Code 590. It uses site specific criteria to determine the phosphorus application rate based on the crop requirement. It addresses the amount, source, placement, form, and timing of the application of all nutrients and soil amendments to meet crop needs. As previously discussed in Section V. of this Fact Sheet, the nutrient application rate is based on the most limiting nutrient which is typically phosphorus, thus there is minimal potential to have excess nutrients available to leave the site and affect water quality.

As required by Texas Water Code § 26.504, for LMUs with a soil phosphorus concentration of 200 - 500 ppm in Zone 1, (0-6 inches depth if incorporated, 0-2 or 2-6 inches depth if not incorporated), the permittee must submit a nutrient utilization plan based on crop removal. At the discretion of the certified nutrient management specialist, the nutrient utilization plan may also include a phosphorus reduction component. This nutrient utilization plan must be submitted to the TCEQ for review and approval. The nutrient utilization plan is a revised nutrient management plan developed utilizing the same NRCS 590 Practice Standard tool to evaluate the site

specific elements in the LMU such as slope and distance to water courses, the rates, methods, schedules of manure and sludge application, and best management practices including physical structures and conservation practices utilized by the CAFO to assure the beneficial use of manure, sludge, and wastewater is conducted in a manner that prevents phosphorus impacts to water quality. A crop removal application rate is the amount of nutrients contained in and removed by the proposed crop.

As required by Texas Water Code Chapter 26.504, for LMUs with a soil phosphorus concentration of greater than 500 ppm in Zone 1, (0-6 inches depth if incorporated, 0-2 or 2-6 inches depth if not incorporated), the nutrient utilization plan must be based on crop removal and include a phosphorus reduction component. A phosphorus reduction component is a management practice, incorporated into the nutrient utilization plan, that is designed to further reduce the soil phosphorus concentration by means such as phosphorus mining, moldboard plowing, or other practices utilized by the permittee. This revised nutrient utilization plan must also be submitted to the TCEQ for review and approval. Permittees required to operate under a nutrient utilization plan with a phosphorus reduction component must show a reduction in the soil phosphorus concentration within 12 months or may be subject to enforcement actions.

After a nutrient utilization plan is implemented, the permittee shall land apply in accordance with the nutrient utilization plan until the soil phosphorus is reduced below 200 ppm. Each of these plans must be developed and certified by a nutrient management specialist. This three tiered approach, when implemented, should minimize the potential for nutrients to accumulate in the soil and reduce nutrient concentrations in LMUs. Failure to operate in accordance with a nutrient management plan or nutrient utilization plan may constitute a violation of state law and this permit and may subject the permittee to enforcement action.

## B. TECHNOLOGY-BASED REQUIREMENTS

Technology-based effluent limitations are considered in the proposed individual permit. Effluent limitations are based on "best conventional pollutant control technology", and "best available technology economically achievable", a standard which individually represents the best performing existing technology in an industrial category or subcategory. "Best available technology economically achievable" and "best conventional pollutant control technology" effluent limitations may never be less stringent than corresponding effluent limitations based on "best practicable control technology", a standard applicable to similar discharges before March 31, 1989 under Clean Water Act § 301(b)(1)(A).

Frequently, the Environmental Protection Agency adopts nationally applicable

guidelines identifying the "best practicable control technology", "best conventional pollutant control technology", and "best available technology economically achievable" standards to which specific industrial categories and subcategories are subject. When such guidelines are published, the Clean Water Act, § 402(a)(1) requires that appropriate "best conventional pollutant control technology" and "best available technology economically achievable" effluent limitations be included in permitting actions on the basis of the permitting authority's best professional judgment.

The Environmental Protection Agency standard for CAFOs, as contained in 40 Code of Federal Regulations Parts 122 and 412, is no discharge of waste or wastewater from animal feeding operations into water of the United States, except when chronic or catastrophic rainfall or catastrophic conditions cause an overflow. All waste including any manure, litter, bedding or feedwaste from animal feeding operations and any water contaminated by waste contact must be stored or utilized to comply with this individual permit, which requires applicable technology control.

The conditions of the proposed permit have been developed to comply with the technology-based standards of 40 Code of Federal Regulations Part 412. The proposed permit includes provisions and performance standards based on NRCS technical standards rather than numeric limitations, to address the collection, storage, treatment and land application of manure, sludge or wastewater and to limit pollutants in discharges. This permit exceeds these standards by requiring the 25 year/10 day storm event storage.

C. WATER QUALITY-BASED REQUIREMENTS

The proposed permit would authorize the land application of manure, sludge, and wastewater, and would only allow a discharge to surface water when chronic or catastrophic rainfall or catastrophic conditions result in an overflow of a properly designed, operated and maintained RCS. No water quality impacts are expected to occur from land application based upon properly prepared and implemented nutrient management practices.

Instead of numeric water quality based effluent limitations, this permit establishes management practices to restrict discharges to occur only during defined chronic or catastrophic rainfall events or catastrophic conditions. Discharges occurring during these conditions would be highly intermittent in nature and should be significantly diluted by rainfall runoff.

D. MONITORING REQUIREMENTS

Monitoring requirements were established based on TCEQ rules, and 40 Code of Federal Regulations Part 412. For any discharges, grab samples must be collected daily and analyzed for Biochemical Oxygen Demand, Total and Fecal Coliform, Total Dissolved Solids, Total Suspended Solids, Nitrate, Total Phosphorus, pH, Ammonia Nitrogen and pesticides (if suspected). Samples must be taken annually from land application areas and analyzed for Nitrate, Phosphorus, Potassium, Sodium, Magnesium, Calcium, Soluble salts/electrical conductivity, and pH. Discharges and soil analyses are reported to TCEQ.

E. REQUIREMENTS FOR BENEFICIAL USE OF MANURE, SLUDGE, AND WASTEWATER BY LAND APPLICATION AND EVAPORATION

The proposed permit contains requirements related to the collection, handling, storage and beneficial use of manure, sludge, and wastewater by land application or evaporation. These requirements were established based on TCEQ rules, Environmental Protection Agency guidance, NRCS Field Operations Technical Guidance and the Animal Waste Management Field Handbook, recommendations from the TCEQ's Water Quality Assessment Team, and best professional judgment.

40 Code of Federal Regulations Section 122.42(e)(1) specifies that a nutrient management plan must be developed and implemented by July 31, 2007. The elements of a nutrient management plan as listed in 40 Code of Federal Regulations Section 122.42(e)(1) have been incorporated into this permit. This permit requires a nutrient management plan or nutrient utilization plan and each of the required elements to be implemented upon issuance of this permit. In relation to these items, the proposed permit is more stringent than federal requirements.

This permit also requires the development and implementation of a CNMP by December 31, 2006. The CNMP must consider manure, sludge, and wastewater handling and storage, land treatment practices, nutrient management, documentation of implementation and management activities associated with the CNMP, feed management (voluntary), and alternative uses for manure. This requirement is not required by federal rule and is, consequently, more stringent than federal requirements.

The proposed permit authorizes the use of third-party fields, i.e. land not owned, operated, controlled, rented, or leased by the CAFO owner or operator that have been identified in the PPP. The permittee must have a contract with the operator of the third-party fields. The written contract must require all transferred manure, sludge or wastewater to be beneficially applied to third-party fields in accordance with the

applicable requirements in 30 Texas Administrative Code §321.36 and §321.40 at an agronomic rate based on soil test phosphorus. A certified nutrient management specialist must annually collect soil samples, in Zone 1 (0-6 inches depth if incorporated, 0-2 and 2-6 inches depth if not incorporated), from each third-party field used and have the samples analyzed in accordance with the requirements for permitted LMUs. The permittee is prohibited from delivering manure, sludge or wastewater to an operator of a third-party field once the soil test phosphorus analysis shows a level equal to or greater than 200 ppm or after becoming aware that the third-party operator is not following the specified requirements and the contract. The permittee will be subject to enforcement action for violations of the land application requirements on any third-party field. The third-party fields must be identified in the pollution prevention plan. The permittee must submit a quarterly report with the name, locations, and amounts of manure, sludge or wastewater transferred to operators of third-party fields.

## VIII. THREATENED OR ENDANGERED SPECIES

The discharge from this permit action is not expected to have an effect on any federal endangered or threatened aquatic or aquatic dependent species or proposed species or their critical habitat. This determination is based on the United States Fish and Wildlife Service's (USFWS) Biological Opinion on the State of Texas authorization of the Texas Pollutant Discharge Elimination System (TPDES) dated September 14, 1998 and the October 21, 1998 update. To make this determination for TPDES permits, TCEQ and Environmental Protection Agency only considered aquatic or aquatic dependent species occurring in watersheds of critical concern or high priority as listed in Appendix A of the USFWS Biological Opinion. This determination is subject to reevaluation due to subsequent updates or amendments to the Biological Opinion. The permit does not require Environmental Protection Agency review with respect to the presence of endangered or threatened species. A comment letter has been received by the United States Fish and Wildlife Service (USFWS) related to migratory birds. TCEQ has directed the applicant to contact USFWS to address this specific issue.

## IX. PROCEDURES FOR FINAL DECISION

When an application is declared administratively complete, the Chief Clerk sends a letter to the applicant instructing the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the applicant to place a copy of the application in a public place for review and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application. This notice informs the public about the application, and provides that an interested person may file comments on the

application or request a contested case hearing or a public meeting.

Once a draft permit is completed, it is sent, along with the Executive Director's preliminary decision, as contained in the fact sheet, to the Chief Clerk. At that time, Notice of Application and Preliminary Decision will be mailed to the people identified on the Office of the Chief Clerk mailing list and published in the newspaper. This notice sets a deadline for making public comments. The applicant must place a copy of the Executive Director's preliminary decision and draft permit in the public place with the application.

Any interested person may request a public meeting on the application. A public meeting is intended for the taking of public comment, and is not a contested case proceeding.

After the public comment deadline, the Executive Director prepares a response to all significant public comments on the application or the draft permit raised during the public comment period. The Chief Clerk then mails the Executive Director's Response to Comments and Final Decision to people who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that a person may request a contested case hearing or file a request for reconsideration of the Executive Director's decision within 30 days after the notice is mailed.

The Executive Director will issue the permit unless a written hearing request or request for reconsideration is filed within 30 days after the Executive Director's Response to Comments and Final Decision is mailed. If a hearing request or request for reconsideration is filed, the Executive Director will not issue the permit and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If the Executive Director calls a public meeting or the Commission grants a contested case hearing as described above, the Commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the Commission will consider all public comments in making its decision and shall either adopt the Executive Director's response to public comments or prepare its own response.

For additional information about this application, contact Ms. Deana Moore at 512-239-5445.

_____ _____

Deana Moore
Land Application Team
Wastewater Permitting Section
Water Quality Division

Date

# Attachment 1

| | Existing Authorization #WQ0003197000 issued June 27, 1997 | Proposed permit |
|---|---|---|
| Head Count | 2,000 | 3,000 of which 2,500 are milking cows |
| RCS Required Capacity (acre-feet) | 53.4 acre-feet | 79.6 acre-feet |
| RCS Actual Capacity (acre-feet) | 114.39 acre-feet | To be determined after construction |
| Additional capacity (acre-feet) | unknown | Permit requires RCS enlargement to meet required capacities for operating volume and the design storm event |
| PE certification of RCS design volumes | not required | required |
| Design rainfall criteria | 25 year/24 hour rainfall event | 25 year/10 day rainfall event |
| RCS management plan | not required | required |
| RCS depth marker | 25 year/24 hour designation | 25 year/10 day designation; and 1 foot graduations to bottom of pond |
| Management of sludge volume in RCSs | clean out required when volume exceeds 50 % of treatment capacity, not required in RCS without treatment capacity | clean out required when sludge volume meets or exceeds the sludge volume designed for each RCS – annual measurement of sludge accumulation beginning in year 3 of the permit |

| | | |
|---|---|---|
| RCS discharge monitoring | monitored for fecal coliform, 5-day biochemical oxygen demand, total suspended solids, ammonia nitrogen, and any pesticide which the operator has reason to believe could be in the discharge | monitored for all previous parameters plus total coliform, total dissolved solids, nitrate, and total phosphorus |
| Chronic discharge determination | not required | required |
| Land application of sludge | based on nitrogen requirement of the crop | allowed |
| Agronomic rate | based on nitrogen requirement of crop | based on phosphorus requirement of crop |
| Land application of manure, sludge, and wastewater | at agronomic rates unless soil phosphorus levels exceed 200 ppm | in accordance with a phosphorus based nutrient management plan, unless soil phosphorus levels exceed 200 ppm |
| Phosphorus index risk assessment | not required | required |
| Additional manure removed from the facility | unlimited options for final disposition | compost facility, landfill or beneficially land applied outside the watershed, or beneficially land applied to third-party fields |
| Buffer distances between land application and surface water | 100 ft on LMUs that have water in the state | 136 ft on LMUs that have water in the state |
| Nighttime land application | allowed | prohibited between 12 am and 4 am |
| Soil sampling notification | no notice required | regional office notification prior to sampling |
| Soil sampling | permittee collects annually | CNMS collects annually |

# Attachment 2

| Permit Provision | Purpose |
|---|---|
| 25 year/24 hour rainfall event to 25 year/10 day rainfall event | • 60% increase to the storage capacity reserved for chronic rainfall<br>• should remain dry except during chronic or catastrophic rainfall events<br>• will reduce potential for overflow |
| RCS management plan | • predicts expected end of the month water storage volumes for each RCS<br>• requires permittee to manage water level accordingly<br>• requires permittee to maintain minimum wastewater operating volume<br>• will reduce potential for overflow |
| Monitor and record RCS wastewater level daily | • provides visual indication of compliance |
| One foot increments on pond marker | • identifies the level of wastewater storage to assist the permittee in the implementation of RCS management plan<br>• enforcement tool |
| Maintain RCS sludge volume at or below designed sludge volume | • requires sludge removal to maintain the required wastewater storage capacity<br>• will reduce overflows associated with insufficient wastewater storage capacity |
| Land application prohibited 12 am to 4 am | • reduces the potential of irrigation related discharges associated with equipment malfunctions |

| | |
|---|---|
| Nutrient Management Plan (based on crop requirement rate) | • 40 % reduction in land application rate by going from N rate to P rate<br>• establishes the annual application rate based on annual soil analyses, phosphorus index, and management practices used at the facility<br>• based on NRCS Practice Standard 590 |
| Nutrient Utilization Plan (based on crop removal rate) | • stabilizes and/or reduces phosphorus on high phosphorus LMUs by establishing the annual application rate based on the amount of nutrients removed by the previous year's harvest based on NRCS Practice Standard 590 |
| CNMP | • whole farm mass balance of nutrients which considers all inputs, onsite use and treatment, outputs, and losses.<br>• inputs include animal feed, purchased animals, fertilizer<br>• outputs include animals sold, harvested crops removed from facility, and manure removed from the facility<br>• losses include volatilization, runoff, and leaching |
| Excess manure must go to compost, landfill, outside of watershed, or third-party fields | • limits unregulated use of manure within the watershed<br>• offsite use incurs additional record-keeping to document how excess manure is used.<br>• provides mechanism to track 50% voluntary removal goal in TMDL |
| Chronic discharge determination | • discharges resulting from chronic conditions are more closely scrutinized by TCEQ Regional Office<br>• validates chronic conditions claim provides documentation to TCEQ for enforcement of unauthorized discharge |

| | |
|---|---|
| Soil sampling notification | • allows the TCEQ to observe sample collection and/or obtain split samples for duplicate analysis<br>• assures data collected is credible to support application rates in nutrient management plan |
| Soil sampling by technical service provider | • ensures that samples are collected by unbiased individuals who are knowledgeable about soil sampling techniques and sample preservation |
| Conservation Practices for LMUs adjacent to water of the state (136 foot vegetative buffer, filter strips, vegetative barrier, contour buffer strips) | • reduce erosion, suspended solids and nutrients in runoff from LMUs.<br>• site specific conditions and NRCS practice standards specifies which Conservation Practices must be implemented |

COPY

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

TO: LaDonna Castañuela, Chief Clerk DATE: July 19, 2007

THRU: Shawn Hutcherson, Work Leader Sent 7/19/07
Land Application Team, Water Quality Assessment and Standards Section (MC-150)

FROM: James Moore, Permit Writer
Land Application Team, Water Quality Assessment and Standards Section (MC-150)

SUBJECT: ADDITIONS TO BE MADE TO DRAFT PERMIT
Hidden View Dairy- Permit No. WQ0003197000

Attached are additions to the draft permit for the above-referenced facility. These additions do not require the permit application to be renoticed.

Please contact me at Ext. **0171** if you have any specific questions.

James M. Moore

Attachment

**Texas Commission on Environmental Quality**

INTEROFFICE MEMORANDUM

TO: LaDonna Castañuela, Chief Clerk DATE: November 28, 2006

THRU: Charles Maguire, Team Leader
Land Application Team, Wastewater Permitting Section (MC-148)

FROM: James Moore, Permit Writer James M. Moore
Land Application Team, Wastewater Permitting Section (MC-148)

SUBJECT: ADDITIONS TO BE MADE TO DRAFT PERMIT
Hidden View Dairy, a Texas general partnership - Permit No. WQ0003197000

Attached are additions to the draft permit for the above-referenced facility. These additions do not require the permit application to be renoticed.

Please contact me at Ext. **0171** if you have any specific questions.

Attachment

# Compliance History

| | | | |
|---|---|---|---|
| Customer/Respondent/Owner-Operator: | CN602586737 Hidden View Dairy | Classification: AVERAGE | Rating: 12.43 |
| Regulated Entity: | RN102819562 HIDDEN VIEW DAIRY | Classification: AVERAGE | Site Rating: 12.43 |

ID Number(s):

| | | |
|---|---|---|
| WASTEWATER AGRICULTURE | PERMIT | WQ0003197000 |
| WASTEWATER AGRICULTURE | EPA ID | TX0120197 |
| WASTEWATER AGRICULTURE | REGISTRATION | TXG015304 |
| WATER QUALITY NON PERMITTED | ID NUMBER | R04AG0012 |
| PETROLEUM STORAGE TANK REGISTRATION | REGISTRATION | 77538 |

Location: The facility is located on the NW side of CR 522 approx one quarter mile NE of the intersectionn of CR 522 and HWY 6 in Erath County — Rating Date: 9/1/2006 Repeat Violator: NO

TCEQ Region: REGION 04 - DFW METROPLEX

Date Compliance History Prepared: July 18, 2007

Agency Decision Requiring Compliance History: Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.

Compliance Period: January 27, 1999 to July 18, 2007

TCEQ Staff Member to Contact for Additional Information Regarding this Compliance History

Name: Katherine Faz Phone: 512-239-2012

## Site Compliance History Components

1. Has the site been in existence and/or operation for the full five year compliance period? Yes
2. Has there been a (known) change in ownership of the site during the compliance period? Yes
3. If Yes, who is the current owner? Hidden View Dairy
4. If Yes, who was/were the prior owner(s)? N/A
5. When did the change(s) in ownership occur? N/A

**Components (Multimedia) for the Site :**

A. Final Enforcement Orders, court judgements, and consent decrees of the state of Texas and the federal government.

Effective Date: 06/03/2002 ADMINORDER 2001-0774-MWD-E

Classification: Moderate

Citation: 30 TAC Chapter 321, SubChapter K 321.181(a)
TWC Chapter 26 26.121

Rqmt Prov: V PERMIT

Description: Failed to prevent tailwater and stormwater runoff from discharging into an unlined impoundment, resulting in the discharge of stormwater and wastewater from an unlined impoundment, resulting in the discharge of stormwater and wastewater.

Classification: Moderate

Citation: 30 TAC Chapter 321, SubChapter B 321.39(f)(19)(A)
TWC Chapter 26 26.121

Description: Failed to prevent a discharge of pollutants into or adjacent to waters in the state through irrigation management practices that prevent the discharge or drainage of irrigated wastewater.

B. Any criminal convictions of the state of Texas and the federal government.

N/A

C. Chronic excessive emissions events.

N/A

D. The approval dates of investigations. (CCEDS Inv. Track. No.)

1 01/19/2001 (113227)
2 04/06/2001 (IE0016431001001
3 05/25/2001 (113529)
4 08/03/2001 (39896)
5 08/22/2002 (8951)
6 05/23/2003 (436466)
7 06/18/2003 (33802)
8 02/03/2004 (259600)
9 07/29/2005 (400720)
10 12/14/2005 (434971)

11 11/21/2006 (513290)
12 01/30/2007 (537171)

E. Written notices of violations (NOV). (CCEDS Inv. Track. No.)

F. Environmental audits.

Notice of Intent Date: 10/28/2002 (33105)
Disclosure Date: 04/23/2003

Viol. Classification: Moderate
Citation: 30 TAC Chapter 321, SubChapter B
Description: Failed to design, construct, and operate retention control facility #3 to contain all process generated wastewaters and the contaminated runoff from a 25-year, 24-hour rainfall event for the location of the point source.

G. Type of environmental management systems (EMSs).

N/A

H. Voluntary on-site compliance assessment dates.

N/A

I. Participation in a voluntary pollution reduction program.

N/A

J. Early compliance.

N/A

Sites Outside of Texas

N/A